

REQUEST FOR PROPOSALS

TECHNICAL ASSISTANCE –FOR THE

SICHUAN REGIONAL HEALTH NETWORK AND SERVICES STRATEGY

Submission Deadline: **12:00 P.M.**

LOCAL TIME

January 12, 2010

Submission Place: Gan HuaPing, Director
Sichuan Health Information Center
80 Wen Miao Street
Chengdu, Sichuan 610041
P.R. China

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SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

REQUEST FOR PROPOSALS

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Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US\$570,642 to Sichuan Health Information Center (the “Grantee”) in accordance with a grant agreement dated August 28, 2009 (the “Grant Agreement”). This USTDA-funded Technical Assistance project (“Project”) will provide strategic and technical advisory services to the Sichuan Health Information Center (SHIC) related to establishing a regional healthcare information network. This Project would enable the creation of a universal healthcare system across Sichuan Province in China (Host Country) based on an e-healthcare technology platform, which would vastly improve the quality of medical services in the region. The Grant Agreement is attached at Annex 4 for reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to perform the Technical assistance.

1.1 BACKGROUND SUMMARY

China’s healthcare sector is entering a stage of significant growth. ICT platforms, software and professional services are a strategic enabler for the policy to succeed. The successful implementation of EHR/RHIN infrastructure in Sichuan will accelerate the investment of healthcare networks in other regions and encourage the adoption of a national standard. EHR/RHIN is vital, in part, because of pressures on social services created by increased personal mobility within China, as technical medical standards would ensure that healthcare data is portable.

The Electronic Health Record (EHR) is an electronic record of patient health information which includes data related to patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports. The EHR makes diagnoses more efficient by automating and streamlining the clinician's workflow. RHIN are intended to establish networks to share data and clinical services among geographically dispersed communities. Together the EHR/RHIN will be an enabler and catalyst for interconnecting the province’s health management information systems, public health information systems, medical services information systems, medical insurance information systems, and drug monitoring information systems, to better facilitate the exchange of information. A well structured EHR system will improve the province’s comprehensive health management, public health and the efficiency and quality of medical services.

The Consultant, in cooperation with SHIC, shall prepare a detailed project plan, for applications, services and business sustainability for e-healthcare services in the Province.

A background Definitional Mission is provided for reference in Annex 2.

1.2 OBJECTIVE

The objective of the proposed technical assistance project is to provide strategic and technical advisory services for the Sichuan Health Information Center (SHIC), the Provincial

government body responsible for designing and operating a new generation of e-health facilities and services in Sichuan. The Project will formulate a development and service strategy to achieve the goals of SHIC's "Healthy Sichuan" initiative, which are to build a province-wide Electronic Health Record filing system (EHR) by 2020 that will parallel the construction of a Regional Health Information Networks (RHIN). The Terms of Reference (TOR) for this Technical assistance are attached as Annex 5.

1.3 PROPOSALS TO BE SUBMITTED

Technical proposals are solicited from interested and qualified U.S. firms. The administrative and technical requirements as detailed throughout the Request for Proposals (RFP) will apply. Specific proposal format and content requirements are detailed in Section 3.

The amount for the contract has been established by a USTDA grant of US\$570,642. **The USTDA grant of US\$570,642 is a fixed amount. Accordingly, COST will not be a factor in the evaluation and therefore, cost proposals should not be submitted.** Upon detailed evaluation of technical proposals, the Grantee shall select one firm for contract negotiations.

1.4 CONTRACT FUNDED BY USTDA

In accordance with the terms and conditions of the Grant Agreement, USTDA has provided a grant in the amount of US\$570,642 to the Grantee. The funding provided under the Grant Agreement shall be used to fund the costs of the contract between the Grantee and the U.S. firm selected by the Grantee to perform the TOR. The contract must include certain USTDA Mandatory Contract Clauses relating to nationality, taxes, payment, reporting, and other matters. The USTDA nationality requirements and the USTDA Mandatory Contract Clauses are attached at Annexes 3 and 4, respectively, for reference.

Section 2: INSTRUCTIONS TO OFFERORS

2.1 PROJECT TITLE

The project is called Sichuan Regional Health Network and Services Strategy.

2.2 DEFINITIONS

Please note the following definitions of terms as used in this RFP.

The term "Request for Proposals" means this solicitation of a formal technical proposal, including qualifications statement.

The term "Offeror" means the U.S. firm, including any and all subcontractors, which responds to the RFP and submits a formal proposal and which may or may not be successful in being awarded this procurement.

2.3 DEFINITIONAL MISSION REPORT

USTDA sponsored a Definitional Mission to address technical, financial, sociopolitical, environmental and other aspects of the proposed project. A copy of the report is attached at Annex 2 for background information only. Please note that the TOR referenced in the report are included in this RFP as Annex 5.

2.4 EXAMINATION OF DOCUMENTS

Offerors should carefully examine this RFP. It will be assumed that Offerors have done such inspection and that through examinations, inquiries and investigation they have become familiarized with local conditions and the nature of problems to be solved during the execution of the Technical assistance.

Offerors shall address all items as specified in this RFP. Failure to adhere to this format may disqualify an Offeror from further consideration.

Submission of a proposal shall constitute evidence that the Offeror has made all the above mentioned examinations and investigations, and is free of any uncertainty with respect to conditions which would affect the execution and completion of the Technical assistance.

2.5 PROJECT FUNDING SOURCE

The Technical assistance will be funded under a grant from USTDA. The total amount of the grant is not to exceed US\$570,642.

2.6 RESPONSIBILITY FOR COSTS

Offeror shall be fully responsible for all costs incurred in the development and submission of the proposal. Neither USTDA nor the Grantee assumes any obligation as a result of the issuance of this RFP, the preparation or submission of a proposal by an Offeror, the evaluation of proposals, final selection or negotiation of a contract.

2.7 TAXES

Offerors should submit proposals that note that in accordance with the USTDA Mandatory Contract Clauses, USTDA grant funds shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in the Host Country.

2.8 CONFIDENTIALITY

The Grantee will preserve the confidentiality of any business proprietary or confidential information submitted by the Offeror, which is clearly designated as such by the Offeror, to the extent permitted by the laws of the Host Country.

2.9 ECONOMY OF PROPOSALS

Proposal documents should be prepared simply and economically, providing a comprehensive yet concise description of the Offeror's capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.

2.10 OFFEROR CERTIFICATIONS

The Offeror shall certify (a) that its proposal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation, and is not submitted in conformity with, and agreement of, any undisclosed group, association, organization, or corporation; (b) that it has not directly or indirectly induced or solicited any other Offeror to put in a false proposal; (c) that it has not solicited or induced any other person, firm, or corporation to refrain from submitting a proposal; and (d) that it has not sought by collusion to obtain for itself any advantage over any other Offeror or over the Grantee or USTDA or any employee thereof.

2.11 CONDITIONS REQUIRED FOR PARTICIPATION

Only U.S. firms are eligible to participate in this tender. However, U.S. firms may utilize subcontractors from the Host Country for up to 20 percent of the amount of the USTDA grant for specific services from the TOR identified in the subcontract. USTDA's nationality requirements, including definitions, are detailed in Annex 3.

2.12 LANGUAGE OF PROPOSAL

All proposal documents shall be prepared and submitted in English, and Chinese version translated from the English version

2.13 PROPOSAL SUBMISSION REQUIREMENTS

The **Cover Letter** in the proposal must be addressed to:

Gan HuaPing, Director
Sichuan Health Information Center
80 Wen Miao Street
Chengdu, Sichuan 610041
P.R. China

Phone: (011) 86 (28) 8613-8790 or +86 131 9850 1689
Fax: (011) 86 (28) 8613-8790

An Original, eight (8) copies in English and five (5) Chinese copies of your proposal must be received at the above address no later than 12:00 PM NOON LOCAL TIME, on JANUARY 12, 2010.

Proposals may be either sent by mail, overnight courier, or hand-delivered. Whether the proposal is sent by mail, courier or hand-delivered, the Offeror shall be responsible for actual delivery of the proposal to the above address before the deadline. Any proposal received after the deadline will be returned unopened. The Grantee will promptly notify any Offeror if its proposal was received late.

Upon timely receipt, all proposals become the property of the Grantee.

2.14 PACKAGING

The original and each copy of the proposal must be sealed to ensure confidentiality of the information. The proposals should be individually wrapped and sealed, and labeled for content including "original" or "copy number x"; the original, eight (8) English copies and five (5) Chinese copies should be collectively wrapped and sealed, and clearly labeled.

Neither USTDA nor the Grantee will be responsible for premature opening of proposals not properly wrapped, sealed and labeled.

2.15 AUTHORIZED SIGNATURE

The proposal must contain the signature of a duly authorized officer or agent of the Offeror empowered with the right to bind the Offeror.

2.16 EFFECTIVE PERIOD OF PROPOSAL

The proposal shall be binding upon the Offeror for NINETY (90) days after the proposal due date, and Offeror may withdraw or modify this proposal at any time prior to the due date upon written request, signed in the same manner and by the same person who signed the original proposal.

2.17 EXCEPTIONS

All Offerors agree by their response to this RFP announcement to abide by the procedures set forth herein. No exceptions shall be permitted.

2.18 OFFEROR QUALIFICATIONS

As provided in Section 3, Offerors shall submit evidence that they have relevant past experience and have previously delivered advisory, technical assistance and/or other services similar to those required in the TOR, as applicable.

2.19 RIGHT TO REJECT PROPOSALS

The Grantee reserves the right to reject any and all proposals.

2.20 PRIME CONTRACTOR RESPONSIBILITY

Offerors have the option of subcontracting parts of the services they propose. The Offeror's proposal must include a description of any anticipated subcontracting arrangements, including the name, address, and qualifications of any subcontractors. USTDA nationality provisions apply to the use of subcontractors and are set forth in detail in Annex 3. The successful Offeror shall cause appropriate provisions of its contract, including all of the applicable USTDA Mandatory Contract Clauses, to be inserted in any subcontract funded or partially funded by USTDA grant funds.

2.21 AWARD

The Grantee shall make an award resulting from this RFP to the best qualified Offeror, on the basis of the evaluation factors set forth herein. The Grantee reserves the right to reject any and all proposals received and, in all cases, the Grantee will be the judge as to whether a proposal has or has not satisfactorily met the requirements of this RFP.

2.22 COMPLETE SERVICES

The successful Offeror shall be required to (a) provide local transportation, office space and secretarial support required to perform the TOR if such support is not provided by the Grantee; (b) provide and perform all necessary labor, supervision and services; and (c) in accordance with best technical and business practice, and in accordance with the requirements, stipulations, provisions and conditions of this RFP and the resultant contract, execute and complete the TOR to the satisfaction of the Grantee and USTDA.

2.23 INVOICING AND PAYMENT

Deliverables under the contract shall be delivered on a schedule to be agreed upon in a contract with the Grantee. The Contractor may submit invoices to the designated Grantee Project Director in accordance with a schedule to be negotiated and included in the contract. After the Grantee's approval of each invoice, the Grantee will forward the invoice to USTDA. If all of the requirements of USTDA's Mandatory Contract Clauses are met, USTDA shall make its respective disbursement of the grant funds directly to the U.S. firm in the United States. All payments by USTDA under the Grant Agreement will be made in U.S. currency. Detailed provisions with respect to invoicing and disbursement of grant funds are set forth in the USTDA Mandatory Contract Clauses attached in Annex 4.

Section 3: PROPOSAL FORMAT AND CONTENT

To expedite proposal review and evaluation, and to assure that each proposal receives the same orderly review, all proposals must follow the format described in this section.

Proposal sections and pages shall be appropriately numbered and the proposal shall include a Table of Contents. Offerors are encouraged to submit concise and clear responses to the RFP. Proposals shall contain all elements of information requested without exception. Instructions regarding the required scope and content are given in this section. The Grantee reserves the right to include any part of the selected proposal in the final contract.

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US\$570,642, which is a fixed amount.

Offerors shall submit one (1) original, eight (8) copies of the proposal in English and five (5) copies of the proposal in Chinese. Proposals received by fax cannot be accepted.

Each proposal must include the following:

- Transmittal Letter,
- Cover/Title Page,
- Table of Contents,
- Executive Summary,
- Company Information,
- Organizational Structure, Management Plan, and Key Personnel,
- Technical Approach and Work Plan, and
- Experience and Qualifications.

Detailed requirements and directions for the preparation of the proposal are presented below.

3.1 EXECUTIVE SUMMARY

An Executive Summary should be prepared describing the major elements of the proposal, including any conclusions, assumptions, and general recommendations the Offeror desires to make. Offerors are requested to make every effort to limit the length of the Executive Summary to no more than five (5) pages.

3.2 COMPANY INFORMATION

For convenience, the information required in this Section 3.2 may be submitted in the form attached in Annex 6 hereto.

3.2.1 Company Profile

Provide the information listed below relative to the Offeror's firm. If the Offeror is proposing to subcontract some of the proposed work to another firm(s), the information below must be provided for each subcontractor.

1. Name of firm and business address (street address only), including telephone and fax numbers.
2. Year established (include predecessor companies and year(s) established, if appropriate).
3. Type of ownership (e.g. public, private or closely held).
4. If private or closely held company, provide list of shareholders and the percentage of their ownership.
5. List of directors and principal officers (President, Chief Executive Officer, Vice-President(s), Secretary and Treasurer; provide full names including first, middle and last). Please place an asterisk (*) next to the names of those principal officers who will be involved in the Technical assistance.
6. If Offeror is a subsidiary, indicate if Offeror is a wholly-owned or partially-owned subsidiary. Provide the information requested in items 1 through 5 above for the Offeror's parent(s).
7. Project Manager's name, address, telephone number, e-mail address and fax number.

3.2.2 Offeror's Authorized Negotiator

Provide name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

3.2.3 Negotiation Prerequisites

1. Discuss any current or anticipated commitments which may impact the ability of the Offeror or its subcontractors to complete the Technical assistance as proposed and reflect such impact within the project schedule.
2. Identify any specific information which is needed from the Grantee before commencing contract negotiations.

3.2.4 Offeror's Representations

If any of the following representations cannot be made, or if there are exceptions, the Offeror must provide an explanation.

1. Offeror is a corporation [*insert applicable type of entity if not a corporation*] duly organized, validly existing and in good standing under the laws of the State of _____. The Offeror has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the Technical assistance. The Offeror is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment, or ineligible for the award of contracts by any federal or state governmental agency or authority. The Offeror has included, with this proposal, a certified copy of its Articles of Incorporation, and a certificate of good standing issued within one month of the date of its proposal by the State of _____.
2. Neither the Offeror nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.
3. Neither the Offeror, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.
4. There are no federal or state tax liens pending against the assets, property or business of the Offeror. The Offeror, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.
5. The Offeror has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The Offeror has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected Offeror shall notify the Grantee and USTDA if any of the representations included in its proposal are no longer true and correct at the time of its entry into a contract with the Grantee. USTDA retains the right to request an updated certificate of good standing from the selected Offeror.

3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL

Describe the Offeror's proposed project organizational structure. Discuss how the project will be managed including the principal and key staff assignments for this Technical assistance. Identify the Project Manager who will be the individual responsible for this project. The Project Manager shall have the responsibility and authority to act on behalf of the Offeror in all matters related to the Technical assistance.

Provide a listing of personnel (including subcontractors) to be engaged in the project, including both U.S. and local subcontractors, with the following information for key staff: position in the project; pertinent experience, curriculum vitae; other relevant information. If subcontractors are to be used, the Offeror shall describe the organizational relationship, if any, between the Offeror and the subcontractor.

A manpower schedule and the level of effort for the project period, by activities and tasks, as detailed under the Technical Approach and Work Plan shall be submitted. A statement confirming the availability of the proposed project manager and key staff over the duration of the project must be included in the proposal.

3.4 TECHNICAL APPROACH AND WORK PLAN

Describe in detail the proposed Technical Approach and Work Plan (the "Work Plan"). Discuss the Offeror's methodology for completing the project requirements. Include a brief narrative of the Offeror's methodology for completing the tasks within each activity series. Begin with the information gathering phase and continue through delivery and approval of all required reports.

Prepare a detailed schedule of performance that describes all activities and tasks within the Work Plan, including periodic reporting or review points, incremental delivery dates, and other project milestones.

Based on the Work Plan, and previous project experience, describe any support that the Offeror will require from the Grantee. Detail the amount of staff time required by the Grantee or other participating agencies and any work space or facilities needed to complete the Technical assistance.

3.5 EXPERIENCE AND QUALIFICATIONS

Provide a discussion of the Offeror's experience and qualifications that are relevant to the objectives and TOR for the Technical assistance. If a subcontractor(s) is being used, similar information must be provided for the prime and each subcontractor firm proposed for the project. The Offeror shall provide information with respect to relevant experience and qualifications of key staff proposed. The Offeror shall include letters of commitment from the individuals proposed confirming their availability for contract performance.

As many as possible but not more than six (6) relevant and verifiable project references must be provided for each of the Offeror and any subcontractor, including the following information:

Project name,
Name and address of client (indicate if joint venture),
Client contact person (name/ position/ current phone and fax numbers),
Period of Contract,
Description of services provided,
Dollar amount of Contract, and
Status and comments.

Offerors are strongly encouraged to include in their experience summary primarily those projects that are similar to or larger in scope than the Technical assistance as described in this RFP.

Section 4: AWARD CRITERIA

Individual proposals will be initially evaluated by a Procurement Selection Committee of representatives from the Grantee. The Committee will then conduct a final evaluation and completion of ranking of qualified Offerors. The Grantee will notify USTDA of the best qualified Offeror, and upon receipt of USTDA's no-objection letter, the Grantee shall promptly notify all Offerors of the award and negotiate a contract with the best qualified Offeror. If a satisfactory contract cannot be negotiated with the best qualified Offeror, negotiations will be formally terminated. Negotiations may then be undertaken with the second most qualified Offeror and so forth.

The selection of the Contractor will be based on the following criteria:

- 1) **Overall evaluation of the Offerors – 15 points**
The Bidders shall be evaluated on the strength of their branding image, technical research and innovation capabilities, and rapid-response service, as well as on an assessment of whether their financial status is healthy and stable.

- 1) **Technical Approach and Work Plan – 20 points** – Bidders must provide a Technical Approach and Work Plan, and within this document, describe how they will approach and conduct the assignment. As part of this Technical Approach and Work Plan, the Bidding Team must commit to work the project as per the tasks, schedule, personnel and deliverables and related items as outlined in the Terms of Reference of the Grant Agreement. They must provide written and signed commitments by each team member regarding scheduling availability (e.g. linked to specific calendar dates such as "September 2009 forward" or "August 15, 2009 forward") and clearly identify specific dates and/or situations that could impact upon their availability during the anticipated project cycle. The Contractor shall commit in writing that they will retain their availability for the complete duration of the project as per the Terms of Reference's schedule. If a Contracting Team has resources or ideas as to how to enhance the Terms of Reference, these resources and/or ideas can be submitted for consideration as an enhancement to

the requirements in the Terms of Reference, but may not substitute for any tasks, deliverables or scheduling plans identified in the Terms of Reference.

2) Qualifications of Project team – 40 points – The Contractor’s team shall fit the following profile requirements:

The consultants selected to perform the work must demonstrate expertise in:

- China’s healthcare sector strategic issues
- Business strategy
- IT technical services and application development, especially in the healthcare sector
- Telecommunications network and services design, especially related to “managed services” or “cloud computing”

Some individuals on the team will be capable of performing multiple roles, depending on experience. The overall profile of the types of professionals required for the TA is as follows:

- China healthcare technical strategists
 - Senior consultant(s), at least 10 years’ experience in the healthcare sector. Strong knowledge of international healthcare IT standards such as HL7 V3, HL7 V2,, ICD9/10, ICD9-CM3, DICOM, IHE, ISO 15189, etc. Intimate familiarity with technology architectures, data protocols, system design etc. in the hospital and public healthcare sector in the U.S. Proven track record with regional or multi-site public health systems and networks.
 - Junior consultant(s), 5+ years experience in China healthcare sector
- Business strategy and planning consultants
 - Senior consultant(s), 10+ years management consulting and business planning experience. Solid background advising industries with complex value chains undergoing transformation through ICT.
 - Junior consultant(s), 5+ years experience in financial modeling
- IT service designer(s)
 - Senior application architect(s), 8+ years’ experience with substantial subject matter expertise in healthcare applications, database or shared services
 - Junior application architect(s), 5+ years’ experience
- Telecommunications strategist / service architect
 - Senior Consultant(s), 10+ years’ experience, with proven expertise in network design or operations, with proven ability to correlate business strategy with technology design.

3) Regional Experience (People’s Republic of China) – 25 points – Experience working in China, especially on China Healthcare strategy issues. The successful bidder will have shown a clear understanding of/experience with the Chinese government and local health reform policy. Experience with government or State-

run organizations or private entities in the People's Republic of China will be useful.

Proposals that do not include all requested information may be considered non-responsive.

Price will not be a factor in contractor selection.

ANNEX 1

Gan HuaPing, Director
Sichuan Health Information Center
80 Wen Miao Street
Chengdu, Sichuan 610041
P.R. China

Phone: (011) 86 (28) 8613-8790 or +86 131 9850 1689
Fax: (011) 86 (28) 8613-8790

2009-31049A Sichuan Regional Health Network and Services Strategy

POC: John Kusnierek, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009. Sichuan Regional Health Network and Services Strategy. The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to provide strategic and technical advisory services to the Sichuan Health Information Center (SHIC) related to establishing a regional healthcare information network.

The objective of the proposed feasibility study is to provide strategic and technical advisory services for the Sichuan Health Information Center (SHIC), the Provincial government body responsible for designing and operating a new generation of e-health facilities and services in Sichuan. The study will formulate a development and service strategy to achieve the goals of SHIC's "Healthy Sichuan" initiative, which are to build a province-wide Electronic Health Record filing system (EHR) by 2020 that will parallel the construction of a Regional Health Information Networks (RHIN).

The Electronic Health Record (EHR) is an electronic record of patient health information which includes data related to patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports. The EHR makes diagnoses more efficient by automating and streamlining the clinician's workflow. RHIN are intended to establish networks to share data and clinical services among geographically dispersed communities. Together the EHR/RHIN will be an enabler and catalyst for interconnecting the province's health management information systems, public health information systems, medical services information systems, medical insurance information systems, and drug monitoring information systems, to better facilitate the exchange of information. A well structured EHR system will improve the province's comprehensive health management, public health and the efficiency and quality of medical services.

China's healthcare sector is entering a stage of significant growth. ICT platforms, software and professional services are a strategic enabler for the policy to succeed. The successful implementation of EHR/RHIN infrastructure in Sichuan will accelerate the investment of healthcare networks in other regions and encourage the adoption of a national standard. EHR/RHIN is vital, in part, because of pressures on social services created by increased personal mobility within China, as technical medical standards would ensure that healthcare data is portable.

The Consultant, in cooperation with SHIC, shall prepare a detailed project plan, for applications, services and business sustainability for e-healthcare services in the Province. The Consultant shall complete and include the following:

- Task 1: Project Kick off: Discussion of overall project strategy, objectives and deliverables, followed by an inception report detailing the project plan.
- Task 2: Business Analysis and Strategic Plan: Provide a business analysis and long-term strategy for the implementation of e-healthcare services based on EHR in Sichuan Province.
- Task 3: Technology and Operational Assessment: Analyze and assess regional EHR system and formulate the architecture and guidelines for the future of Sichuan health information system and applications.
- Task 4: Reference Architecture: Evaluate reference architecture for EHR data center and RHIN to meet application services and investment expectations.
- Task 5: Human Resources and Organization: Identify optimal organizational structure and human resource requirements to successfully implement EHR strategy in Sichuan
- Task 6: Regulatory analysis: Prepare a review of regulatory issues and discuss any regulations in the host country that would impact the project's viability or prognosis to move forward.
- Task 7: Environmental Analysis: Provide a review of the programs anticipated impact on the environment.
- Task 8: Developmental impacts: Provide an analysis of development impacts on China related to infrastructure, market oriented reform, human capacity building, technology transfer and productivity improvement, etc
- Task 10: Final Report and Workshop: A final report summarizing the Consultant's observations, recommendations, technical diagrams and other documentation related to program implementation. Conduct a final workshop presenting the results of the feasibility study as well as recommended future action plans.

The U.S. firm selected will be paid in U.S. dollars from a \$570,642 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and a background definitional mission/desk study report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to:

<https://www.ustda.gov/USTDA/FedBizOpps/RFP/rfpform.asp>. Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

Only U.S. firms and individuals may bid on this USTDA financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.

Interested U.S. firms should submit their Proposal in English and in Chinese directly to the Grantee by 12:00 p.m. local time on January 12, 2010 at the above address.

Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

ANNEX 2

USTDA

Definitional Mission
China: Healthcare and Emergency
Response ICT Systems Projects
Requisition No 2009310006/200931007A

FINAL REPORT

July 2, 2009



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This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U.S. Government. The opinions, findings, conclusions, or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report.

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Definitional Mission Report

China Emergency Response and Healthcare ICT

1.0 Executive Summary

Network Dynamics Associates (NDA) was retained by USTDA to perform a Definitional Mission in China covering information and communications technologies (ICTs) in two sectors: Healthcare and Emergency Response. The goal of the mission was to identify technical assistance projects for USTDA consideration related to China's national healthcare reform initiative and as part of the U.S. technical response to the Wenchuan earthquake in Sichuan Province last year.

At the time of contract award our assumption was that greatest opportunities for USTDA might lie in the emergency response and disaster management arena. Upon probing, we discovered that timing for USTDA activity in emergency response was simultaneously too early and too late. In our view it was too late to participate in post-earthquake technical support, as a number of programs had been initiated by other donors in the aftermath of the May 12, 2008 disaster. It was also too early because China has not yet formalized its national disaster management strategy. While estimates suggest China will spend more than \$1 billion on disaster management platforms and software in 2009-2010, at the present time authorities in both Beijing and at the provincial level are hesitant to undertake feasibility and planning studies until policy consensus has emerged.

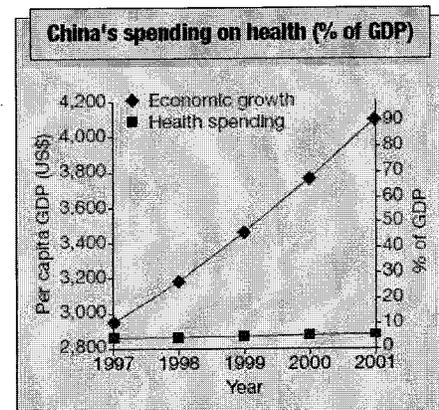
Healthcare ICT is an extremely hot topic in China. In January the government announced a RMB 850 billion (\$124 billion) national stimulus package for the healthcare sector. The program aims to achieve universal insurance coverage, construct primary care facilities, improve public health, and extend services in rural areas. It also targets lowering the cost of medical services, beginning with reform of pharmaceutical charges and drugs distribution. Information technology is viewed as an enabler for the realization of policy objectives across all of these areas. Following numerous meetings with Chinese agencies and U.S. firms, Network Dynamics believes that USTDA can play a timely and constructive role in China's healthcare ICT sector by stimulating leading regional investments in networks and technology platforms in accordance with international healthcare standards.

We note that there are many conflicting opinions about the future direction of China's healthcare markets. We observed wide commonality of perspectives on the *objectives* of healthcare reform, following the State Council's direction. But we also encountered honest and sometimes profound differences of opinion about the right technological approach for achieving stated policy objectives. Experts are competing for the intellectual mandate that will shape evolution of the sector over time and the stakes are high. Network Dynamics met with an usual degree of "spin" from market participants and concerted efforts were made to shape our thinking. Often we were told completely

contradictory stories, both from Chinese officials and U.S. companies, as well as efforts by market players to discredit the views of competitors.

In January 2009 China announced a massive RMB 850 billion (\$124 billion) stimulus package over three years to fundamentally improve the nation's healthcare sector. Some RMB 350 billion (\$52.2 billion) is slated to be allocated directly from the central government budget and is targeted principally at rural investments. The balance of RMB 500 billion (\$74.6 billion) is expected to be provided by provincial and municipal sources. China's overall spending on healthcare amounted to about \$185 billion in 2007, or 5.67% of China's GDP of \$3.251 trillion.

Healthcare costs have soared in recent years. From 1990 to 2006 outpatient costs were on average 12 times higher than 1990, and in-patient treatment costs were about 10 times higher. During the same period urban and rural incomes increased by only 5-7 times.¹ Spending on healthcare has clearly not kept pace with China's miraculous economic growth (see figure). Curiously, analysts suggest that, in response to the SARS crisis, China may have over-invested in complex public health systems at the expense of basic healthcare reform. The new stimulus appears ready to address the essential shortcomings of the system, while simultaneously achieving important political goals as well.



Source: Dong Z. Hoven C. Rosenfield A. "Lessons from the Past". *Nature*. 10 February 2005

Beijing hopes to achieve results across five policy fronts:

- Increase the number and quality of healthcare facilities.** Today China has some 19,000 hospitals at the county level and 45,000 at the township level. Overall, there are 315,000 health organizations across the country. Rural area facilities dramatically lag behind the cities in terms of quality, scope of services, and doctor/patient ratios. The government is keenly aware of the need to redress "imbalances" of healthcare service between wealthy and rural areas. In 2000 China ranked 188 out of 191 countries in the World Health Organization's ranking for fairness of healthcare finance. The stimulus will lead to the construction of 2000 hospitals at the county level and 5000 clinics at the township level. Rural investments will be made directly by the central government and not as a cost-share with the provinces, underscoring the importance Beijing places on improving living standards (and ensuring stability) in poor areas.

Additionally, MoH hopes to build 2400 to urban community or neighborhood **primary care clinics** to alleviate service demand on big hospitals. According to the MoH, the number of patients registering at city hospitals doubled from 2005 to 2007. Beijing's three largest hospitals each support more than 8000 new patient visits *per day*. Efforts will be made to link medical centers of excellence in the cities with outlying areas.

¹ Gu, Edward "Towards Universal Coverage: China's New Healthcare Insurance Reforms" (forthcoming), cited in *Averting Crisis*

- **Establish universal healthcare insurance.** The government is keen to provide a safety net for the uninsured, especially important now that as many as 20 million migrant laborers have lost jobs since December 2008 and have returned to the countryside. Nearly 50% of healthcare costs in China are borne by individuals, which typically are paid out-of-pocket. MoH Health Minister Chen Zhu stated in March 2009 that about 77% of the population is currently covered by personal healthcare insurance (1 billion out of 1.3 billion total population, including 814 million rural residents), either through government, individual, or rural co-op medical schemes. The target is to reach 90% of the population in the next three years. U.S. industry observers doubt the government's current insurance penetration level. One company's research suggests that less than 30% of China's population has medical insurance today. The firm estimates that over 40% of the urban population and 57% of people in rural areas have no coverage at all.² In the poorest areas, covering hundreds of millions of citizens, people can not afford to pay for even basic healthcare service. Chinese commercial insurance companies have expressed an interest to become involved in the sector through public-private partnerships but the government has been reluctant to cede control and plans to administer insurance financial instruments through the state. The MoH states a preference for European and Canadian healthcare models, perhaps due to past imperfect efforts to introduce market-oriented reforms, especially in hospital care.
- **Reform pharmaceutical and drugs distribution.** In the market reforms of the 1990s, state-owned enterprises and collectives in the healthcare sector were downsized or dismantled and hospitals became independent profit centers (despite remaining state owned). They discovered significant margins of up to 15%, set by the state, could be made from marking up the distribution of drugs. This policy led to endemic over-prescribing of medications and routine over-charges to patients. More than 40% of hospital revenues are derived from sales of pharmaceuticals. A proposed national drug administration and management policy, "*State-owned Hospital Procurement for Drugs*," first vetted in 2008, is expected to require hospitals to divest drug store operations. The government will centrally regulate drug prices. To enact this transformation, the MoH is seeking to reinvent the drug distribution supply chain, including introducing end-to-end management with enterprise resources planning (ERP) and related software solutions.
- **Improve public healthcare,** especially related to pandemic and infectious disease control. With the outbreak of SARS China profoundly stepped up its efforts related to infectious disease surveillance, mitigation and control. It has implemented a four-tier disease surveillance and response system utilizing a variety of devices, sensors, incident management decision support systems and operational procedures, some of which were developed with the assistance from the US Center for Disease Control (CDC). Meetings with US-CDC in Beijing

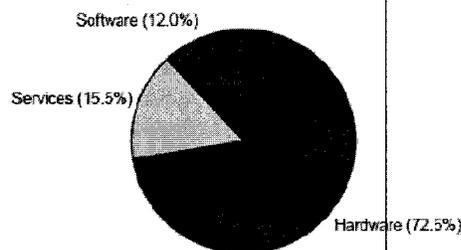
² The corporate statistics are supported by *Averting Crisis*, a white paper prepared for the Carnegie Endowment for International Peace, "*Averting Crisis: A Path Forward for China's Healthcare System*," by Meredith Wen http://www.carnegieendowment.org/files/China_Healthcare_System_Full_Text.pdf The paper notes that, prior to market reforms, about 75% of the urban labor force was covered between the Public Health Insurance Scheme and the Labor Health Insurance Schemes, but that by 2006 only 47% of urban residents were covered.

indicate that the system is highly resilient and proved effective with the subsequent Avian Flu outbreak. It remains central to efforts to monitor influenza and is a cornerstone of bio-terrorism surveillance capability. With the advent of TB/HIV, China has also begun to address blood safety, particularly following well-publicized incidents of contamination in recent years. The government hopes to further strengthen the public health system for unknown and emerging infectious diseases as well as implement regional public health crisis management centers. MoH plans to develop 330 emergency centers around the country. Each of the centers will received central government funding of approximately \$500,000 per facility, or as much as \$165 million. Local authorities could augment budgets further.

- **Hospital reform** is aimed at better training for professionals and increased investment in healthcare IT. MoH statistics indicate that only 2.9% of healthcare personnel working in township (rural) healthcare centers hold a BA degree; 24.9% have received a junior college education; 56.5% have secondary technical school backgrounds; and 15.8% have received a high school level of education or below. For hospitals, the figures are: 38.8%, 33.2%, 20.7% and 3.6% respectively. Additionally, a key aspect of hospital reform is the move to establish “digital hospitals” through investments in Healthcare IT (HIT) and adoption of electronic medical record standards. Regional Healthcare Information Networks (RHIN) are intended to establish networks to share data and clinical services among geographically dispersed communities.

Aspects of the reform agenda depend on new structural capabilities that can only be made possible through comprehensive application of ICTs. Improved transparency, lower costs, higher efficiency, remote healthcare, universal insurance, and interoperability among systems and shared resources all depend on new information technology platforms. Interestingly, the stimulus package dedicates only a single paragraph to the enabling information infrastructure required to achieve the strategic policy goals. No mention is made of funds that will be allocated specifically for ICT. Network Dynamics estimates that the percentage of new HIT spending associated with the stimulus will be between 1.2% and 1.8% of total. This equates to approximately \$1.45 billion to \$2.6 billion for 2009-2011, or annual incremental spending of \$500 million to \$1 billion. These estimates are based on discussions with multiple expert sources.

Healthcare market Segment by Solution, 2007

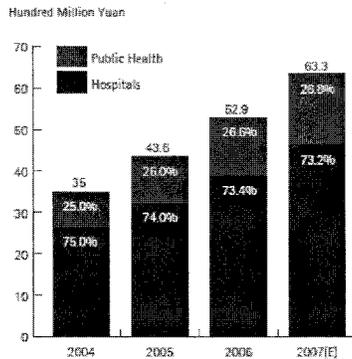


Source: IDC China Healthcare Industry IT Solution Forecast

According to the Chinese Hospital Information Management Association (CHIMA), HIT spending hit RMB 6.5 billion (\$970 million) in 2007, up 62.7% from the previous year. Growth has averaged about 20% per year since 2004 and compound annual growth rate for 2007-2012 is estimated at 21.2%. Sales could reach \$1.2 billion this year, before the addition of new investment from the stimulus package. Total

spending could top \$2 billion per annum in the years ahead.

The bulk of spending has been within hospitals themselves, about 73% (see CHIMA figure³). Hospital capital spending is however highly decentralized, with each facility making its own purchasing decisions. A lack of standardization has led to a plethora of unique or customized technical systems, with limited interoperability. The inability to transfer data effectively restricts patient and clinical care options and raises overall healthcare costs. Most systems in place today are associated chiefly with administrative



management. Only the largest, wealthiest and most sophisticated hospitals have expanded their information systems to include clinical diagnosis, decision support, and electronic patient records. Fewer still are pursuing information sharing through regional health information networks, a centerpiece of the government's reform effort. It bears noting that there is wide disparity in spending levels by geography, with most extensive commitment having been made in the wealthy Eastern provinces. On average, Chinese hospitals invest 2%-5% of operating revenues into IT compared to 12%-15% in

the US. Rural spending on healthcare IT is minimal.

Competition in the HIT market is heavily fragmented. Most spending is made at a local level and at the discretion of hospital information management departments.

Consequently there are many niche players. CHIMA estimates that fewer than 20 out of the 300 Chinese independent software vendors (ISVs) involved in health informatics have more than 100 staff. Even the largest ISVs – Bsoft, Kingstar Winning, Neusoft – have failed to earn more than 8% market share. IBM, a powerhouse in China's IT, claims a 45% position. With so many buyers of hospital systems, and so many sellers, there are few industry norms. The notable exceptions are hospitals associated with the People's Liberation Army, which have a unified technological approach for many IT platforms and services.

2.1 HEALTHCARE IT STANDARDS

The lack of standardization complicates take-up and adoption of unified e-healthcare solutions. China has been struggling to define standards for two important technical frameworks: Electronic Medical Records (EMR), the data standard for formatting "cradle-to-grave" patient medical history information; and, Electronic Health Records (EHR), the standard to govern the transmission and interoperability of medical data between healthcare facilities and insurers, doctors, pharmacies and the wider healthcare establishment. EHR is coupled closely with the need to develop regional health information networks (RHIN). Both the EMR and EHR standards are crucial to widespread adoption of healthcare information technology in China but achieving commonality of understanding of what the standards should be has proven elusive. The government reform program states that uniform health records for all of China will be launched from 2009 onwards – but most observers believe the transformation will take at

³ CHIMA and Accenture, "The White Paper on China's Hospital Information Systems," May 2008

least 5-10 years to implement. Today as many as 30 EHR/RHIN pilots are said to be currently underway.

The MoH created the Electronic Records Standards Technical Steering Committee in 2006 to develop draft national standards for EMR and EHR/RHIN. Common standards are clearly in the U.S. interest. A unified technical approach would favor strong solutions integration companies by normalizing development and deployment of systems. IBM, Microsoft, Intel and GE Healthcare all participate in the Steering Committee as members. US companies would like the Chinese to adopt standards that comply with globally accepted international approaches (e.g., HL7)⁴.

Serious technical debate – and serious bureaucratic competition – prevails within the industry. Within the MoH, there is tension between those advocating fundamental adoption of international standards, which can be modified for the Chinese market, and those who prefer to develop and mandate a Chinese standard from scratch. For EHR/RHIN, MoH seeks to define a data format that can be adopted as a national standard. By contrast, provincial leaders are moving ahead with regional trials, often in line with international approaches. They hope their trials become accepted as “golden pilots”: demonstration technologies that become de facto standards. Each project is competing against other regions (and in some cases against Beijing) for first-mover advantage. In April 2009 MoH published a 170-page “EHR Guidebook”⁵ in effort to steer debate but observers note that it falls short of codifying a national EHR standard.

EHR/RHIN is vital, in part, because of pressures on social services created by increased personal mobility within China. The pace of internal migration is accelerating compared to strict restrictions on travel from just a few years ago. As many as 300 million rural residents will move to the cities by 2020, according to the World Health Organization. Today it is virtually impossible for a person from one province to gain access to pension, social security, medical reimbursements and so on in another. Technical medical standards would ensure that healthcare data is portable. From a technical perspective, the challenge is defining the data vocabulary and structure that can capture the myriad of methods already in use by hospitals and health administrators. The greater obstacle perhaps is creating the organizational mandate to encourage take up and adoption of a national standard while regional and local solutions continue to proliferate. This applies equally to efforts to create a new standard for EMR.

Essential to the EHR/RHIN vision is the potential for enabling the next generation of “tele-medicine” services. Powerful telecom networks, shared applications and data centers would allow patients in poor areas to obtain clinical services “virtually” from rich ones, using advanced ICT. Tele-radiology (PACS), video diagnosis, drugs databases, public health disease surveillance are just a few applications that can be provided electronically to remote regions. By leveraging shared infrastructure, poor areas will be

⁴ For reference, see: <http://www.hitsp.org/>

⁵ *Scheme for the Construction of a Regional Health Information Platform for Medical Records (For Discussion)*

able to participate in modern medical network services without having to replicate the investments locally.

2.1.1 *EMR Standard Proposal from MoH*

Network Dynamics has reviewed proposals for two feasibility studies related to standards development. The first, for EMR, was developed by the Ministry of Health, Center for Health Statistics and Information and titled: “*Terms of Reference for China Hospital EMR Developing Strategy and Interoperability Standard Framework* (March 3, 2009).” The MoH proposal provides an outline of a comprehensive study to research and define the functional model, information architecture and system architecture of hospital EMR, and the conditions for inter-operability. MoH estimates the work to require three years to complete with a project budget of \$1 million. It recommends four work streams:⁶

- **“First**, propose an EMR user requirement analysis report based on strong statistical data from Chinese hospitals. The report will answer the following questions: the objective for EMR in Chinese hospitals; the content and development phases for EMR; the function and data requirement; the current IT context around EMR; analysis of users of EMR; and the functional and information requirements.
- **Second**, the project will research and propose a reference standard for hospital EMR implementation, including EMR basic functions, content and structure. It is not a physical model for a specific case, but should provide concrete guidelines for EMR implementation and inter-operability. For example, the content and structure standard for medical summary to guarantee the bottom line of inter-operability.
- **Third**, the project will research and propose hospital EMR functional and developmental specification, provide a plan and design for use by independent software vendors (ISVs), and cooperate with users and ISVs to define the guidelines.
- **Fourth**, the project will propose the EMR policy suggestion with the MoH based on successful worldwide case examples. The policy will take more local factors into consideration to push health ecosystem reform, push hospital to apply EMR, improve health service efficiency, decrease healthcare errors and lower healthcare cost. The policy will promote inter-operability and avoid the storing of application data in silos.”

As part of our consideration of this study, Network Dynamics attempted to identify the market potential for ICT products and services that could result from adoption of an EMR standard, as well as ascertain interest in the study from U.S. technology companies. According to CHIMA, incremental spending associated with EMR would amount to approximately RMB 5 million (\$750,000) per hospital at the largest “Grade 3” hospitals, of which there are approximately 1000 in China. CHIMA estimates that about 10% of hospitals, or 100, are sufficiently advanced that they might adopt an EMR standard were it to be introduced in the next 3 years. The addressable market for EMR-related

⁶ MoH language edited for readability.

investments is thus perhaps \$75 million in the near term. If American firms achieve market share of 20%-50%, the export potential could be \$15 million-\$37.5 million. Additional investments might also be associated with the replacement of existing hospital IT systems of up to RMB 50-100 million per hospital (\$7.5 million-\$15 million). However, hospitals would be unlikely to completely turn over installed technology to adopt a new EMR standard.

U.S. companies have made clear that the absence of healthcare IT standards is a “strong inhibitor” to successful participation in the market. Nevertheless, Network Dynamics recommends that USTDA should not undertake the MoH EMR study at this time for the following reasons:

1. EMR is an extremely complex issue with a long history of inconclusive debate in China. A USTDA study may not be able to untangle the technology and policy stalemate, exposing USTDA to execution risk;
2. There is no uniformity of commitment for the study within the top ranks of technical planners at MoH and competition among internal projects could become a liability;
3. China is a “provider market” of healthcare services and each hospital can choose its own IT technology strategy, making administration and acceptance of a national standard complicated;
4. With high market fragmentation, hospital IT systems are won on a case-by-case basis, a competitive dynamic that favors local software firms with preexisting relationships with hospital buyers;
5. The budget (\$1 million) and duration (3 years) of the study is beyond USTDA’s typical scope. It is not evident that the scale could be significantly reduced without compromising the technical resources required to define a technical standard as proposed;
6. U.S. corporations have fundamental differences of opinion regarding the utility of a national EMR study. Some have commercial interests tied directly to resolution of EMR while others are pursuing alternative approaches. The lack of consensus among the U.S. export community is difficult to reconcile;
7. Regional projects may offer better opportunities to accomplish concrete results than an effort that aims to reform the entire national system;
8. The time scale for measurable results for U.S. exports is not encouraging. MoH suggests a 3-year timeline for completion of the study. In fact resolution of the issue could take longer, as evidenced by the ongoing dialog about EMR since at least 2002.

Finally, despite intensive research and widespread discussions – as well as wide acknowledgment by industry players that Network Dynamics has quickly and correctly identified the key strategic issues impacting the sector – we simply do not know enough about the political and technical nuances of EMR in China to comfortably recommend a study at this time. Because the study request comes from official state organizations, we

recommend that USTDA continue dialog with MoH through the health sector specialists in the Foreign Commercial Service at the embassy to determine if a study on EMR might be appropriate in the future.

2.1.1 EHR Standard Proposal from CHIMA

Network Dynamics also received a proposal for a feasibility study to develop an EHR/RHIN standard from CHIMA. CHIMA is the leading industry association, think-tank, and independent policy voice tracking technology trends in China's healthcare industry, and a sub-group of the powerful China Hospital Association. It is aligned closely with the Healthcare Information and Management Systems Society (HIMSS) (<http://www.himss.org/ASP/index.asp>). CHIMA's proposal was submitted following a full day working session with Network Dynamics on February 27, 2009. The Foreign Commercial Service participated in the meeting as did healthcare IT specialists from leading hospitals in Beijing. A follow-on half-day session was held on March 18, 2009.

CHIMA makes a compelling case about the importance of EHR/RHIN standards in China. Among the arguments in favor include:

- The State Council has indicated that an EHR standard must be adopted beginning in 2010. Now is a critical juncture in the planning process;
- An EHR standard will ensure interoperability between healthcare systems, allowing portability of patient and clinical data among healthcare service providers;
- A standard will lower infrastructure capital costs and avoid duplication of administrative resources. CHIMA estimates that the cost of a scalable regional RHIN data center is about the same as each of the many local data centers that would need to be constructed without the EHR standard;
- EHR will help standardize clinical treatments and procedures, thereby improving the overall quality of healthcare
- The market will be significant.

From the U.S. export perspective, the most enticing argument is the size of the potential market that will be created with the adoption of EHR/RHIN. CHIMA's research indicates that at least 100 municipalities on the Eastern seaboard are planning EHR/RHIN initiatives. Average infrastructure spending per city is estimated at RMB 400 million to RMB 500 million (\$60 million to \$75 million). These figures yield a potential addressable market of \$6 billion to \$7.5 billion over the next 10 years. When the interior provinces are included, nationwide spending could top \$15 billion. CHIMA optimistically projects that U.S. firms can capture 50% of the market (an estimate Network Dynamics considers aggressive). Regardless of perspective, U.S. companies concur a national standard would support their interests and commercial opportunities.

Despite these strong positions in favor, Network Dynamics has made a difficult "judgment call" not to recommend a feasibility study for a national EHR/RHIN. We expended a considerable amount of thought coming to this conclusion. While we are in complete agreement with CHIMA's strategic perspective and have high confidence in its professional capabilities, we nonetheless conclude that significant externalities

complicate chances for project impact. We came to this conclusion based on four principal observations:

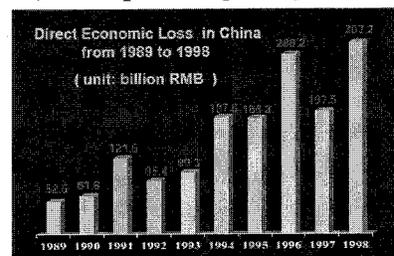
1. **Key constituencies at MoH do not support the effort.** CHIMA's voice in the healthcare industry is strong. However, to be successful, a sustainable national EHR standard would need to be endorsed by the government (CHIMA itself agrees on this point). Unfortunately, the head of the responsible department at the MoH (Rao Ke Qing) does not support an initiative to develop an EHR/RHIN according to international standards. In fact, he holds a nearly opposite view, alluded to in the sections above. USTDA risks stepping into competition among senior technocrats with opposing points of view, exacerbating existing strategic rifts. While it is clearly in the U.S. interest to encourage China to adopt international norms, Network Dynamics' perspective is that it is not possible to achieve the required government buy-in through a CHIMA-supported project. Active political support from the Minister or Vice Minister level is required to overcome internal rivalries and ensure USTDA is not drawn unproductively into internal battles. It is possible that executive support for a national standards initiative by USTDA could be obtained, but the effort is not within the resource scope of this Definitional Mission.
2. **It may be easier, and more effective, to support EHR/RHIN at the regional level.** Regional health authorities are moving ahead with EHR/RHIN trials, today, without waiting for Beijing to resolve the national standards conundrum. All the major cities in the Eastern provinces are formulating plans to implement systems beginning in 2010 and have the resources to fund the projects without financial assistance from the central government. Network Dynamics believes that USTDA can make a meaningful impact by supporting two of the leading EHR/RHIN plans, in Sichuan and Zhejiang. Both projects are a) strongly inclined toward adopting international healthcare IT standards; b) in active discussions with U.S. firms to supply technology platforms for the projects; and c) the net impact of successful trials could be equal to or greater than definition of a data standard that is not connected explicitly with infrastructure spending.
3. **The technical dimension of EHR/RHIN standard definition in China is highly technical and not well suited to a feasibility study.** Defining a national standard in China for EHR/RHIN demands a dedicated technical team to resolve many complex and competing concepts regarding data vocabulary, application definition, functional workflow, communications protocols, and so on. USTDA could consider a Technical Assistance project rather than a Feasibility Study. It would however require expert understanding of the technical underpinnings, and policy dimension of the technical debate, if it wishes to commission the resources wisely. Given that the technical debate on this subject has been underway for years, with no obvious sign of conclusion, Network Dynamics has come to the view that it is simply too complicated a problem for USTDA consideration.
4. **The scope and timescale would not lead to immediate U.S. commercial opportunities.** While the market potential is enticing, the definition and

promulgation of an EHR/RHIN standard is by nature a long-term affair. It is unlikely that a national standard could be completed, vetted and implemented in the next three years. From a USTDA perspective, the gap between funding to measurable results does not meet the Agency's evaluation criteria.

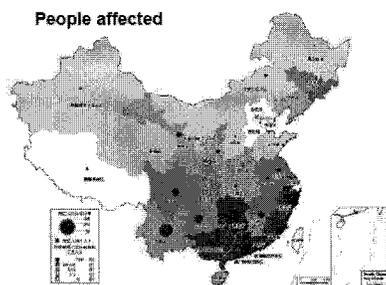
Despite the difficulties associated with the national initiative, we believe strongly in supporting CHIMA's agenda. To harness its depth, energy and expertise, we propose that CHIMA be made an integral part of the study team for the recommended project in Sichuan. In this respect, if it agrees to participate, CHIMA can provide a pro-international standards voice to the dialog and influence the outcome of an important near-term investment initiative.

Disaster Risk Management and Emergency Response

China has long been plagued by natural hazards. In 2005 the death toll from floods, typhoons, and earthquakes, droughts, blizzards, and landslides reached 2,475 with direct economic losses of RMB 204 billion (\$25.3 billion).⁷ Over 70 per cent of Chinese cities and more than 50 per cent of the 1.3 billion Chinese population are distributed in regions with severe natural disasters like weather-related disasters, earthquakes, geological disasters, and marine disasters. The Yangtze River flood of 1998, the drought in Chongqing Municipality and Sichuan Province in 2006, the Huai River flood of 2007, the 2008 snowstorms in southern China and, of course, the massive quake in Sichuan have all inflicted major losses of life and property. Economic losses from accidents and disasters amounted to 650 billion yuan (80.15 billion US dollars) a year, accounting for six per cent of the country's GDP, according to a senior official from the Ministry of Public Security.⁸



Recent H5N1 Bird Flu outbreaks (as well as persistent concerns related to the China origins of influenza and Avian flu) in the Eastern Provinces create social jitters and have increased pressure on the government to do better. Both national and regional authorities have been roundly criticized for poor execution. The government is acutely aware that it needs to improve disaster preparedness, response and recovery performance to save lives and property – and, ultimately, to mitigate public wrath. Substantial investment in ICT for emergency response may be required to achieve policy objectives.



The government has responded with the creation of a 'national disaster emergency management system.' A State Council directive established a general emergency response plan said to be now implemented in all 31 provinces, along with 25 sub-plans for specific emergencies and 80 ministerial sub-plans. Clearly, however, there are gaps in the government's efforts. The Wenchuan earthquake (May 12, 2008) led to deaths toll of over 69,000 with 5.5 million – and as many as 11 million – left homeless and the government has struggled to cope with larger problems. The financial impact exceeded RMB 85 billion (\$12.6 billion).

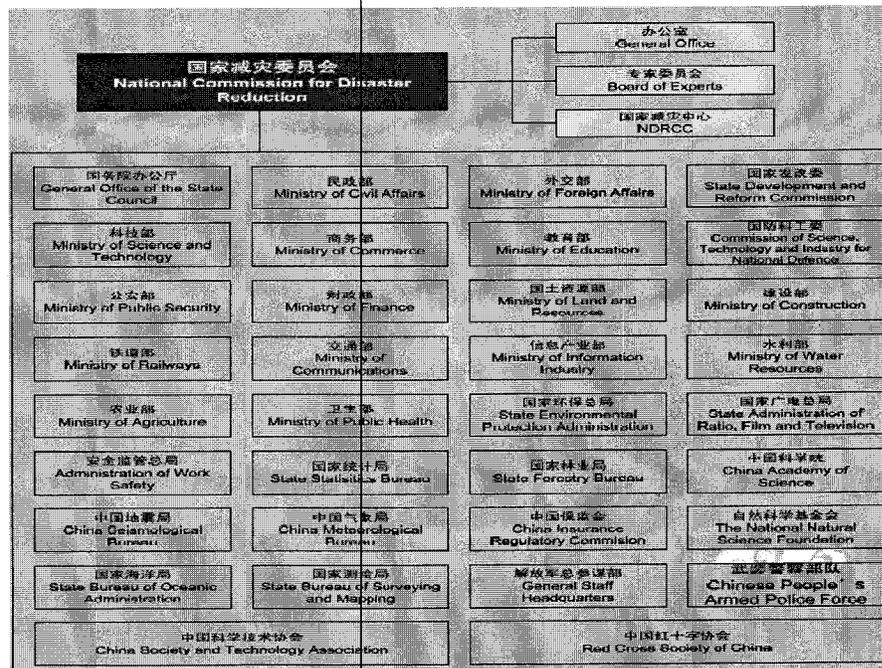
Beijing initiated an intense review of its approach to Disaster Risk Management (DRM) immediately following the Sichuan earthquake. Though China's overall DRM capabilities are formidable, the system showed significant weaknesses in the recent crises, owing largely to a lack of coordination between the myriad agencies responsible for different emergencies. A State Disaster Relief Commission (SDRC), established in 2005, is responsible for coordinating all disaster management affairs in China. It operates a

⁷ Source: Data estimate from WorldWatch Institute. Chart from NDRCC.

⁸ "Accidents Haunt Weekend," China Daily, 28 November 2005.

24/7 command center with links to multiple agencies and government jurisdictions. An important part of its work is to oversee information collection, analysis and response efforts of the 30 different ministries and departments that have direct roles in DRM (see figure). Different state units, comprised of different stations and networks, are assigned responsibility for monitoring, forecasting, and handling different types of disasters: meteorological, oceanic, hydrological, geological / earthquakes, plant diseases, crop insect pests, forest fires, forest diseases, forest insect pests, traffic accidents, industrial accidents, public health incidents, and social safety incidents. And so on. The array of organizations, each with vertical organizations with representatives in each province nationally, is dizzying.

The great challenge to SDRC is that state ministries, accustomed to dealing with their

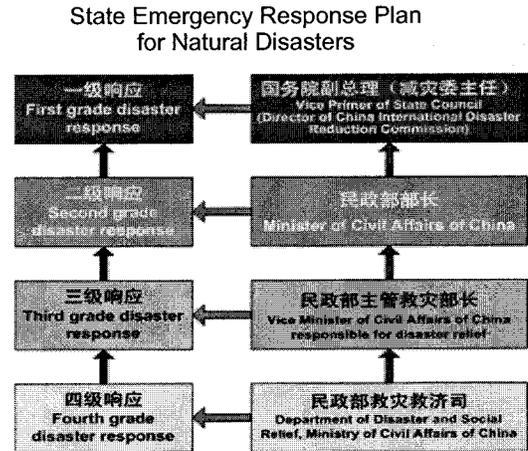


own immediate responsibilities and protective of political turfs, tend to be rigid and protective of their “silos of expertise.” To develop effective, cross-jurisdictional communication for DRM, vested bureaucracies need to become more flexible and embrace coordination. An immensely complicated task to begin with is made more difficult by an inability to exchange information and data among the various departments through efficient ICTs.

The National Disaster Reduction Center of China (NDRCC) is an advisory body housed within the Ministry of Civil Affairs. NDRCC is directly involved in emergency relief work and academic studies including, for example, creating a predictive database to anticipate the occurrence of future natural disasters. Last year NDRCC launched two remote sensing satellites for monitoring natural disasters. It was also given a modular datacenter from Sun to collect and analyze the data streams coming from the sensors on the satellite. NDRCC prepares contingency plans for a variety of disasters, including a 4-stage model that is used to categorize disasters according to severity, and which also

launches the appropriate administrative response (see figure). It holds monthly meetings with key DRM response agencies.

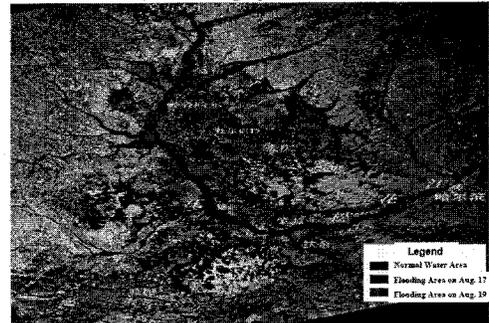
President Hu Jintao has pledged to commit wider application of science and technology in disaster reduction. He has stated that China needs to set up a national platform of ICTs for information sharing on disaster prevention and risk management, at the intra-ministry and intra-region levels. Greater emphasis is also being placed on deployment of remote sensing aircraft, life detectors, and emergency broadband wireless communication systems in relief work.



In June 2008 Hu gave a speech outlining the six areas for DRM reform, captioned as follows:

1. "...provide a theoretical basis for scientific predictions and preventions of natural disasters.
2. ... establish a network-centric setup integrating disaster monitoring, research, and early warning and forecast.
3. study the relations between various natural disasters... and the environment and social development;
4. ...speed up application of remote sensing, geographic information systems, global positioning systems, and network communications technologies and the transformation and comprehensive integration of high-tech disaster prevention and reduction results, establish a national platform for sharing disaster reduction and risk management information, and improve national and local command systems for disaster monitoring, early warning, assessment, and emergency assistance.
5. ... optimize and consolidate science and technology resources...and raise the disaster prevention awareness;
6. ...extensively forge international exchanges and cooperation.”⁹

**Flooding Status in Len Jiang & Song Huajiang Area
(Monitoring by Radarsat)**



⁹ Xinhua, 23 Jun 2008, reported by BBC

A detailed manifesto on China's goals, prepared by the China National Committee for International Disaster Reduction (CNCIDR), a part of the Ministry of Civil Affairs, can be found at: <http://www.preventionweb.net/english/hyogo/national/list/v.php?id=36>.

It is within this policy framework that change will be ushered. It should be noted that the government issued a comprehensive 11th Five-Year National Disaster Reduction Plan in August 2007, prior to the devastating Wenchuan earthquake, which outlined the existing "weak links" in DRM capabilities. Those same weak links persist but will now be addressed with a renewed sense of urgency and purpose.

While some critical elements are missing, China excels at many aspects of disaster relief and reconstruction. As a centrally planned economy (and, arguably, a police state), China can quickly mobilize and leverage the extensive resources of the nation-wide Public Security apparatus and the People's Liberation Army (PLA). In times of floods, nightly video footage of PLA soldiers shoring up dikes or strengthening levies with sandbags serves as effective propaganda. The video is not just show-and-tell: the Chinese government has adopted information and communications technologies that allow nearly instantaneous "situational awareness" of emergency situations. In Chengdu, for example, there is a network of 5000 CCTV cameras capturing images from all over the city, linked to geospatial information systems (GIS) maps and decision support software for data analysis. When something happens, the authorities know about it. For emergency response, this degree of social surveillance is useful. It is equally applied to observing unofficial gatherings and quelling societal disturbances in the guise of promoting greater societal harmony.



3.1 RECOMMENDATIONS

While DRM is a high priority area for the government, we do not envision an opportunity for USTDA as part of the current DM cycle. USTDA is both too early and too late at this juncture in time (early 2Q09). It is too early because Beijing is only beginning to formulate a national strategy for DRM, a broad vision to get the various government agencies tasked with DRM to communicate and coordinate more effectively with one another. This process is just starting. Because the policy has not yet been set, government officials were reluctant to discuss or provide guidance on upcoming DRM program initiatives. That said, the Chinese DRM agencies we met showed a willingness to consider collaboration with USTDA when the timing was right.

Conversely, USTDA is too late with its technical assistance initiative as the World Bank, Asia Development Bank (ADB), and European Union (EU) moved quickly to provide funding for a DRM programs immediately following Wenchuan. These offers included direct aid as well as technical assistance to promote more inclusive and effective disaster risk management systems.

With the renewed effort to combat disasters, spending seems to be rising though no official figures on state DRM spending are available. In 2004 China is believed to have invested approximately RMB 4 billion (\$500 million) on DRM, an increase from 1995's estimated budget of \$230 million (RMB 1.9 billion). IBM estimates that DRM spending will expand as much as 40% in 2009 and exceed \$1 billion investment for platforms and systems, however this estimate includes spending by security agencies.

Additionally, there is growing perception within the Chinese government that the civilian agencies involved in DRM must increase and enhance their capabilities, and that civil society must be more proactively engaged. Here a lack of planning, coordination, and preparedness is exacerbated by the diffuse, fragmented nature of the emergency response system, and the vertical stacks of responsibilities within each ministry.

Going forward, USTDA should consider two areas of engagement that are likely to meet Agency funding criteria: Provincial- and Municipal-level Emergency Management Centers.

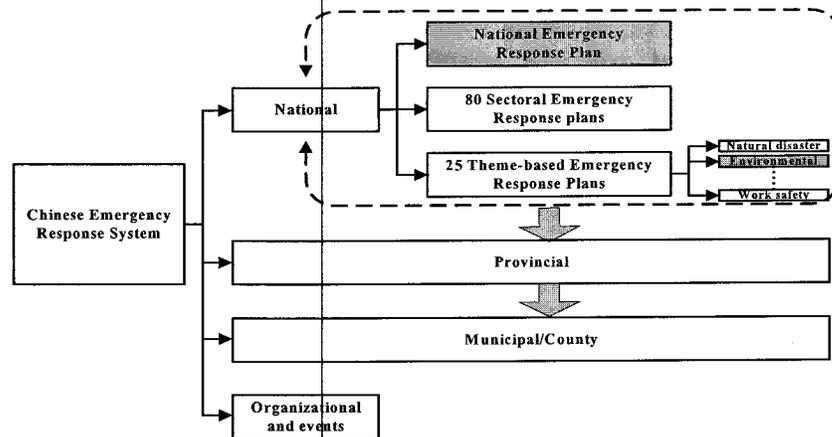
When a disaster strikes in China, the provincial government is often the administrative organ with the most tangible resources at hand, in close proximity to an unfolding crisis.¹⁰ Each province is required to formulate plans and deploy infrastructure for DRM in compliance with the requirements of the national emergency response system. "The provincial headquarters' responsibility is primarily to unify leadership and command of the relief effort within the province, mobilize and integrate resources and make rapid decisions related to relief work. [It] is responsible to request central government or extra-provincial support and to mobilize and command military units, including the army, armed police and local reserve units. The headquarters convenes technical experts and uses impact assessment results to make decisions and allocate resources. Lastly, the headquarters is the consolidation point for data collection and the only body authorized to report information to higher authorities or the public via the media."¹¹

The figure¹² on the following page depicts the relationship of the Provincial and Municipal level emergency response function in the context of the national plan:

¹⁰ *Flood Across the Border: China's Disaster Relief Operations and Potential Response to a North Korean Refugee Crisis*, Drew Thompson and Carla Freeman, Ph.D., U.S.-Korea Institute (USKI) of the Johns Hopkins University's School of Advanced International Studies (SAIS) (April 1, 2009)

¹¹ *Ibid.*

¹² Dr. Zhang Lei and Dr. Zhong Lijin, Environmental Policy Group, Wageningen University, The Netherlands, programs.ssrc.org/eastasia/Zhang%20Lei.ppt



Best near-term (4Q2009) opportunities for USTDA include:

1. Sichuan Emergency Management Centers (EMC).

In Sichuan – where the need for a natural hazards warning and response capability is arguably greatest, in part as a political response to the earthquake – a proposal is under consideration to create a new emergency operations facility. It would combine a new command center, data center, and emergency response communications system and establish a full time staff of up to 40 professionals. Professor Wang Ansheng, Director of the Center for Disaster Reduction at the Chinese Academy of Sciences (CAS), stated that the Sichuan Bureau of Civil Affairs will be responsible for constructing the system. It will cover surveillance, detection, early warning, assessment, and emergency aid command for natural disasters. This planned center will incorporate modern scientific tools like sensors, real time telecoms, GIS, disaster forecasting, and hazard maps. The political motivation in Sichuan is high to cut across the barriers and obstacles that have prevented the establishment of such command and control centers in the past.

The budget for the project is said to be RMB 1.1 billion (\$164 million). Sources indicate that the funds have already been allocated from the central government to the Ministry of Civil Affairs, and that there is a “90 percent” probability that the investment will be released to Sichuan before the end of 2009. *We recommend that USTDA strongly consider a follow-on DM at the beginning of FY2010 in order to capture this opportunity.*¹³ Export opportunities lie with:

- Trunk radio systems (Motorola)
- Network platforms (Cisco)
- Incident management and Decision Support Systems (IBM, Microsoft)
- Servers (Cisco, IBM, HP, Sun)
- Data storage (IBM, others)

¹³ Prof. Wang attempted to set up a meeting on our behalf with the officials in charge of this provincial China Center for Disaster Reduction but they were reluctant to meet as they are only talking of commencing this plan, and do not yet have concrete proposal to offer.

- Solutions and systems integration services.

Also in Sichuan, the provincial government is contemplating related (and possibly parallel) investments in two additional emergency operations platforms. Yuan Chengxin, Director at the **Sichuan Information Industry Bureau**, expressed excitement about a provincial EOC project for health and rescue operations to incidents, accidents, and sudden events. Additionally, the **Sichuan Health Bureau Information Office** is in the early planning stages for establishing an expanded operations center and telecom capacity, according to Yang Yong, Deputy Chief of the Bureau, and colleagues.

2. **City-Level Emergency Operations Centers.** Big city governments are actively developing plans to establish municipal incident management and emergency operations centers to coordinate the disparate crisis response functions at the local level. IBM reports that it is in current discussions with several large city IT departments / mayor's offices planning to commission integrated capabilities in the second half of 2009, too soon for USTDA involvement. Importantly, there is growing recognition within China that local emergency response is timely and growing market sector. *We recommend that include an evaluation of potential city projects be included as part of the follow-on DM suggested above.* The export opportunities are essentially the same.

Additionally, Professor Liu Lianyou with the **Academy of Disaster Reduction and Emergency Management** at Beijing Normal University recently completed an exhaustive assessment of the damage inflicted by the Wenchuan earthquake. The Academy published two books that are circulating internally with the designated ministries for their approval for wider distribution. Prof. Liu and his colleagues have put together a very initial proposal for a nationwide risk evaluation database. The project requires government approval and an official sponsor before they can even contemplate a (pre-) feasibility study. He mentioned this issue was the first (and unfulfilled) of the eight natural disaster response projects mentioned in the 11th Five Year Plan.

The **Chengdu Municipal Information Office**, a large Motorola customer, was less encouraging. Ms. Li Changhong, Deputy Director, indicated Chengdu city is deploying a GIS software and database platform and applications with assistance provided by the EU, administered by the EU China Information Society Project. The Chengdu Municipal government, which also has a Tetra network from Motorola, appeared to be angling for support for a study to see how the existing government radio network could be augmented and coverage extended through TD-CDMA (a Chinese standard) networks -- literally seeking to supplant an existing relationship with Motorola through the use of Chinese home-made technology for next-generation wireless communications. We informed Motorola of our concerns.

4.0 Sichuan Regional e-Health Services Strategy

4.1 EXECUTIVE SUMMARY

Following the national lead to develop and deploy next-generation healthcare services, Sichuan Province is developing a comprehensive plan for introducing advanced healthcare solutions. The strategy, known as “Healthy Sichuan 2020,” sets a number of improved healthcare targets that it hopes to achieve, among them:

- Increased spending on healthcare in the province;
- Expanded Medical insurance;
- Standardization of medical and health institutions;
- Improvement of Grass roots healthcare services; as well as
- Expanded plans for immunization, infectious diseases, chronic diseases, healthy lifestyles, maternal/prenatal/neonatal care, and extended life expectancy, among other programs.

To realize these policy goals, the Sichuan Health Information Bureau (SHIB) [NOTE: While referred to as SHIB in this report, the actual name of the entity is Sichuan Health Information Center, and is referenced as such in the grant and TOR] plans aggressive adoption of advanced information and communications technologies and applications that enable widespread deployment of the new services. The government believes that shared information services that share skills – for example, from large urban areas to the countryside – can dramatically improve healthcare standards overall. Similarly, adoption of standardized healthcare records can lower costs and improve the efficiency of the system. The SHIB has set out four primary work objectives to guide its development effort:

- 1) Build a public health information system and establish an emergency response functionality;
- 2) Implement electronic healthcare services to improve internal administration and foster more transparent government;
- 3) Provide rural health services through a rural health information network
- 4) Establish electronic health records to provide better community level healthcare and medical treatment in cities.

4.2 PROJECT DESCRIPTION

The proposed feasibility study seeks to provide strategic and technical advisory services for the Sichuan Health Information Bureau, the Provincial government body responsible for designing and operating a new generation of e-health facilities and services in Sichuan. According to SHIB, the goal of the “Healthy Sichuan” initiative is to build a province-wide electronic health record filing system (EHR) by 2020 that will parallel the construction of a regional health information platform (RHIN). Together the EHR/RHIN will be an enabler and catalyst for interconnecting the province's health management information systems, public health information systems, medical services information systems, medical insurance information systems, and drug monitoring information

systems, to better facilitate the exchange of information. A well-structured EHR system will improve the province's comprehensive health management, public health and the efficiency and quality of medical services.

Sichuan has the following healthcare facilities in the Province:

- 3A hospitals: 30
- 3B hospitals: 19
- Tier 2 hospitals: 445
- Tier 1 hospitals: 887
- County and above health institution 1,474
- Town-level health institutions: 5,037

According the SHIB, the project consists of the following elements:

The strategic plan for Sichuan Province health informatization

In order to better formulate a strategic health information services plan for Sichuan Province, the SHIB has initiated a comprehensive survey of the present situation of health IT in the province, to assess current resources and determine strengths and weaknesses. This Phase 1 study, currently underway, will establish the baseline “as is” situation in order to gauge progress toward the medium- and long-term (2010-2020) goals for healthcare IT set out in the MoH’s *Healthy China 2020* policy document, the *Healthy Sichuan 2020* policy, and the *Sichuan Healthcareer Development Report*. The final output will include: 1) *Report on the Status of the Sichuan Provincial Health Informatization*; 2) *Report on the Plan and Design for the Sichuan Provincial Health Informatization*; and, 3) *Report on the Implementation Plan for Sichuan Provincial Health Informatization*.

Province-wide health record data center and management system

Ongoing and dynamic collection of data covers all aspects of an individual’s health records in a variety of domains, including: hospital information systems, medical imaging information systems, clinical laboratory information systems, maternal and child health information systems, urban community clinic information systems, public health information systems, health supervision information systems, the new rural cooperative medical information systems, urban medical insurance information systems, and so on. The project focus is to set up the correct health information mechanisms and processes to ensure the capture of widely scattered data; electronic medical records; facilities for massive data storage; and to develop interfaces for data acquisition. SHIB will establish one (1) Provincial Data Center, 21 City Data Centers, and 181 County Data Centers.

Establish a province-wide health services platform based on EHR

SHIB will define an approach to deploy Electronic Health Records (EHR). The EHR will be comprised of a variety of health-related factors for life-long data tracking, from birth through death, for each individual in the province. The project will develop the corresponding management software that will enable

individuals in Sichuan Province to address their own healthcare cares through access to a full range of medical services. A data center will be established at Deyang City that will collect all of this information and assemble it and organize it into personal EHR. Cisco will provide the data center hardware platforms through a corporate social responsibility grant. The entire project is expected to require two years to complete (beyond the timeframe of the proposed USTDA study). Among the services on the horizon include:

- province-wide health management information systems,
- public health information systems
- medical services information systems
- medical insurance information systems
- drug monitoring information systems
- urban community health service information systems
- rural cooperative medical information systems
- health supervision information systems
- drug procurement information systems
- maternal and child health information systems, etc.

Plan Regional Coordination for Sichuan Urban-Rural Medical Services

SHIB wishes to support a demonstration project for collaborative (shared) managed healthcare services between urban and rural healthcare facilities. The project will be carried out by Chengdu University of Science and Technology, Sichuan Province Health Information Bureau, Sichuan Province People's Hospital, four work units associated with the Ministry of Science and Technology (MoST), in line with the MoH's support for major scientific and technological projects as outlined in its "Eleventh Five-Year" plan. The effort is called the "*Regionally Coordinated Medical Services Demonstration Project*", and will propose the use and integration of innovative technologies and products, to set up regional medical and health data centers that will store all-in-one patient repositories of daily physical examination records and treatment processes. Implementation will take place for the sharing of all the healthcare activity data from all medical institutions. At the same time, access to and from the public health information system platform will be provided, to achieve industry-wide and sector-wide information sharing, along with the construction of a complete regional health information network, which will further allow the exchange of data with other government agencies, all in a better effort to offer collaborative (or shared) managed healthcare services through better information exchange. So far, an early pilot implementation phase for this project has begun in Zigong and Yibin City.

For all of these systems, the basic functions and business processes, data models, and the basic data coding all need to be standardized. The desired result of the effort is improved efficiency of medical diagnosis and thus to enhance the quality of medical services.

Additionally, individuals will be able to gain greater control over personal health records and will be better able to interact with medical services agencies, thereby raising their awareness of healthcare. Healthcare authorities will similarly be able to produce a better picture and analysis of the regional overall healthcare situation and trends.

The difficulty in achieving these outcomes – and consequently the need for the study – is to establish the proper development and service strategy, technical processes and operational methods for the sharing and exchanging of health record data.

According to RHIB officials, there is a strong need for technical advisory services to:

- 1) formulate the strategic plan for Sichuan Province health informatization;
- 2) design the Deyang City EHR data center and information management platform; and,
- 3) formulate the Sichuan urban-rural medical services demonstration project with advanced software applications, and to offer technical advice, quality control services, and systems evaluation.

4.3 PROJECT SPONSOR'S CAPABILITIES AND COMMITMENT

The “Healthy Sichuan 2020” program is an official policy initiative of the provincial government, in turn associated with the national healthcare policy, “Healthy China 2020.” The SHIB has the mandate and responsibility to design and implement the program according to local conditions in Sichuan. As such, it is *the* government organization with responsibility to ensure its success. SHIB has initiated work by launching the Phase 1 assessment of ICT facilities at all healthcare facilities in the Province.

SHIB is working closely with Cisco, which has made a sizable corporate social responsibility grant as part of a “Connecting Sichuan” initiative. Cisco is providing strategic and technical planning assistance, program development, as well as a large donation of network platforms and software.

4.4 IMPLEMENTATION FINANCING

In accordance with the National Ministry of Health’s preliminary plans, Sichuan will set up a 3-tier healthcare EHR service information platform plan for central, provincial, municipal (prefecture) levels. SHIB will construct a provincial data center data centers and regional data centers in each of Sichuan’s 21 cities in addition to 181 counties. The capital infrastructure budget for next 5 years is considerable. According to SHIB estimates, the Province will spend approximately \$900 million broken down as follows:

Sichuan Province Healthcare ICT Spending
2009-2014

Category	Key parameters:	Export potential
Hospitals	<ul style="list-style-type: none"> - County and above health institution 1,474 - Town-level health institutions: 5,037 - 3A hospitals: 30 - 3B hospitals: 19 - Tier 2 hospitals: 445 	Hardware: \$250 million Software: \$100 million Sub-total: \$350 million

	- Tier 1 hospitals: 887	
Data centers and RHIN	Provincial Data Center: 1 City Data Centers: 21 County Data Centers: 181	Hardware: \$300 million Software: \$100 million Sub-total: \$400 million
Post-earthquake Rebuilding Plan	Healthcare rebuilding cost: around 15 Billion RMB, out of a total rebuilding cost of about RMB 2 trillion (\$298 billion)	Hardware: \$110 million Software: \$40 million Sub-total: \$150 million
Total	-	Hardware: \$660 million Software: \$240 million Total: \$900 million

Implementation funding will come from provincial and central government budget disbursements, some of which is associated with the healthcare stimulus package. Additionally, the province will have access to healthcare IT funds as part of earthquake reconstruction funds. Total rebuilding cost is estimated at RMB 2,000 Billion (\$298 billion), of which healthcare rebuilding costs total about RMB 15 Billion (\$2.2 billion).

Cisco is committing \$20 million for network and data center infrastructure through a corporate social responsibility contribution.

4.5 U.S. EXPORT POTENTIAL

U.S. Export Potential*

Technology	Potential Value	U.S. Vendors
Data center platforms	Up to \$440 million	Cisco, IBM, HP, Oracle, Sun
Networking equipment	Up to \$220 million	Cisco, IBM, HP
Application software and professional services	Up to \$240 million	IBM, Microsoft, GE Healthcare
Total	\$900 million	

Note these figures apply to *Sichuan only*. It is reasonable to assume that any U.S. products associated with the “Software” market segment (\$240 million) is designed and produced in the U.S. In software alone, *the potential export opportunity associated with the proposed Feasibility Study according to USTDA investment criteria constitutes a “significant multiple” of the cost of the study.*

At \$660 million for the planning period, the anticipated value of the hardware segment is nearly three times that for software sector. If only 10% of the value of the systems is directly attributable to U.S. manufactured goods or intellectual property tied to the creation of American jobs – a scenario we consider “extremely conservative” – the associated export value for hardware would still exceed \$66 million. Taken together, the figures suggest that the addressable market for U.S. exports of software and hardware for Sichuan healthcare will amount to a minimum of \$300 million over the next five years.

4.6 FOREIGN COMPETITION AND MARKET ENTRY ISSUES

The essential market entry issue is encouraging China to adopt EHR standards that are compliant with international standards – and not develop a “China standard” that becomes a non-tariff barrier to trade. There are competing factions in China’s healthcare ICT sector, with one camp favoring adoption of international protocols, the other, with creating EHR data sets apparently “unique” to China. Technical experts within China seem to agree that international standards (and open source solutions) are extremely

valuable, as the standards are built on the collective experiences of others who have pioneered the technology. Some political factions on the other hand support a “home grown” approach. In Network Dynamics’ estimation, such a tendency has the potential become protectionist; it could be intended to favor local independent software vendors (ISVs) and the creation of a domestic healthcare application industry. Were China to follow its own path for EHR, American IT and software companies would be at a competitive disadvantage. Conversely, the adoption of international norms would be helpful to U.S. export interests. As one firm succinctly put it: “There is an international standard for EHR – and we want China to follow it.”

U.S. firms report that the healthcare market in China is fragmented, price-sensitive and traditionally hardware-driven. In practical terms, this means that healthcare ICT system sales are dominated by local solutions integrators who compete on price and informal relationships. Local ISV promote “home grown” products based on open source software platforms and their very low cost solutions have created market entry challenges for US exports. Chinese software solutions are not however considered “open” by some U.S. firms. U.S. companies consequently need to demonstrate significantly greater functionality and price performance to remain competitive with domestic suppliers. The proposed Feasibility Study is designed, in part, to showcase the competitive nature of the (higher cost) American approach.

Sichuan Health Bureau has been approached by at least half a dozen European, Asian and Australian healthcare ICT suppliers for EHR/RHIN opportunities, believed to include EADS and Siemens (Germany), iSofthealth (Australia), Fujitsu (Japan) and others. Some – for example iSofthealth – are making acquisitions or forming distribution partnerships with local firms to improve competitive position, thereby increasing the market entry threshold for U.S. firms.

4.7 DEVELOPMENT IMPACT

China is attempting an ambitious technological leapfrog in healthcare. Its plan for next-generation e-health services through EHR/RHIN technologies and services is, in many ways, a textbook case of clear strategy to design and implement positive social change through ICT. New technologies are just coming to market – “shared services” or “cloud computing” customized for the healthcare sector – that will enable China to quickly, transparently and cost-effectively deliver better healthcare services to more people, especially the rural poor.

Among the key development benefits of the Regional Health Network and Services Strategy based on EHR include:

- Lower healthcare costs
- Improve transparency (financial and clinical diagnosis)
- Enable creation of universal healthcare insurance
- Allow individuals greater control over healthcare records and services

- Disseminate high-quality healthcare services to rural regions through virtual information technology platforms
- Reduce over-prescribing and fraud in the distribution of pharmaceutical drugs.

7.1 Primary Developmental Benefits

Several additional development impacts are likely:

- (1) Infrastructure: By defining a defensible technology platform for electronic health records, successful completion of the feasibility study could lead to widespread adoption in China of technology infrastructure based on international standards. The initial phase of the data center roll-out, in Denyang, would catalyze investments in 20 additional cities in Sichuan, and could indirectly influence data center design in other regions. As the proof of concept of the EHR/RHIN is proven, authorities from the Sichuan health bureau will be likely to obtain expansion phase funding from the Province and from Beijing, stimulating investment in technology platforms that could be provided by U.S. firms.
- (2) Market- Oriented Reform: The most likely impacts on market reform from the SHIB initiative lie with: a) reform of the drugs distribution sector, shifting value from hospital-owned pharmacies to market-oriented retailers; and, b) creation of new services providers that offer e-health services on the new RHIN network, for example, tele-radiology.
- (3) Human Capacity Building: SHIB estimates that as many as 7,500 jobs will be associated with the design, deployment and management of the EHR/RHIN initiative in Sichuan.
- (4) Technology Transfer and Productivity Enhancement: The key outcomes of the project are to: 1) establish a new era of healthcare services in Sichuan, using information technologies to significantly improve the quality and scope of healthcare services; 2) ensure that RHIB is capable of executing its vision to introduce new information technology platforms and services for healthcare, and thereby stimulate U.S. trade opportunities; 3) create a regional and high-profile showcase for next-generation e-health services enabled by American technology and services.

4.8 IMPACT ON THE ENVIRONMENT

The Regional Health Network and Services Strategy will have no negative impact on the environment. The long-term vision of enabling virtual clinical services to remote areas will have a positive impact on the environment by reducing travel required to obtain high-quality medical services in distant hospitals and clinics.

4.9 IMPACT ON U.S. LABOR

With a potential addressable market for health ICT technology platforms, applications and services of an estimated \$900 million over the next five years, U.S. vendors are rightfully excited about export opportunities in Sichuan. American firms have been positioning aggressively against domestic equipment vendors, led by Huawei and ZTE. Cisco and Motorola are among the few remaining manufacturers of large scale telecommunications technology companies still domiciled in the U.S. There is a reasonably high probability that the technology will be manufactured in China. If this is

the case, there would be little or no U.S. content of *manufactured goods* from the U.S. However, there may be a net positive benefit from intellectual property licenses, software development or other benefits. We are not equipped to judge the impact on job created in the U.S. or if there is any aspect of the project that would contravene the Foreign Operations, Export Financing and Related Programs Appropriates legislation.

4.10 QUALIFICATIONS

The consultants selected to perform the work must demonstrate expertise in:

- China's healthcare sector strategic issues
- Business strategy
- IT technical services and application development, especially in the healthcare sector
- Telecommunications network and services design, especially related to "managed services" or "cloud computing"

Some individuals on the team will be capable of performing multiple roles, depending on experience. The overall profile of the types of professionals required for the TA is as follows:

- China healthcare technical strategists
 - b. Senior consultant(s), at least 15 years' experience in the healthcare sector. Strong knowledge of international healthcare IT standards such as HL7, ICD9/10, DICOM, ISO 15189, etc. Intimate familiarity with technology architectures, data protocols, system design etc. in the hospital and public healthcare sector in the U.S. Proven track record with regional or multi-site public health systems and networks.
 - c. Junior consultant(s), 5+ years experience in China healthcare sector
- Business strategy and planning consultants
 - d. Senior consultant(s), 15+ years management consulting and business planning experience. Solid background advising industries with complex value chains undergoing transformation through ICT.
 - e. Junior consultant(s), 5+ years experience in financial modeling
- IT service designer(s)
 - f. Senior application architect(s), 10+ years' experience with substantial subject matter expertise in healthcare applications, database or shared services
 - g. Junior application architect(s), 5+ years' experience
- Telecommunications strategist / service architect
 - h. Senior Consultant(s), 15+ years' experience, with proven expertise in network design or operations, with proven ability to correlate business strategy with technology design.

4.11 JUSTIFICATION

Justification for the project falls along three key vectors. First, it represents a powerful opportunity to influence standards in the fast-growing healthcare sector in China. The project will showcase international technical standards that countervail protectionist interests in China. Second, Sichuan is a “unique” opportunity to make things happen in the healthcare infrastructure market as the government is motivated to show concrete reconstruction results following the Wenchuan earthquake. Third, there are a constellation of U.S. corporate interests active in Sichuan, among them Cisco, GE Healthcare, IBM, Intel, Motorola and Oracle, all seeking to influence the future direction of healthcare ICT spending. An initiative by USTDA would help unlock export market potential.

4.12 TERMS OF REFERENCE

TOR is attached below as Appendix 4-1

4.13 STUDY BUDGET

We propose a budget for the project of **\$570,642** for the project, of which

\$422,600 is for consulting and professional services, and
\$148,042 is for other direct expenses.

The duration of the engagement as defined in the terms of reference is projected to be completed within twelve (12) months from the commissioning of the Contractor.

13.1 LINE ITEM BUDGET AND TASK BREAKDOWN

The Contractor must complete all work items specified in Appendix 4-1, attached. The total budget for the project is **\$570,642**. No cost share is implied.

Total Task Cost Summary	
Labor Total	\$422,600
Other Direct Costs	\$148,042
Total Budget Cost	\$570,642

Budget Breakdown	
Contractor Cost Share	\$0
Grantee Cost Share	\$0
USTDA Contribution	\$570,642
Total	\$570,642

The budget assumes a total of 466 person days. The distribution and weighting of resources described below is suggestive (see next table). The contractor may seek to allocate professional resources in a different manner than indicated in the table but the work plan must be approved by USTDA:

**Sichuan Regional e-Healthcare Services Strategy
Budget Detail by Task**

Task Summary Labor Days	Sr. Tech	Jr. Tech	Finance	Legal	Days	Task \$
1 Kick off	12	34	0	0	46	\$40,400
2 Business Analysis and Strategic Plan	36	70	15	0	121	\$107,600
3 Technology and Operational Assessment	65	60	0	0	125	\$119,500
4 Reference Architecture	15	33	0	15	63	\$59,400
5 Human Resources and Organization	8	28	10	0	46	\$39,200
6 Development Road Map and Workplan	5	20	0	0	25	\$21,500
7 Regulatory analysis	0	2	0	0	2	\$1,600
8 Environmental analysis	0	1	0	0	1	\$800
9 Development impacts	0	2	0	0	2	\$1,600
10 Final Report and Workshop	10	25	0	0	35	\$31,000
Sub Total	151	275	25	15	466	\$422,600
Daily Rate	\$1,100	\$800	\$800	\$1,100		
Task Labor Cost Summary						Total
1 Kick off	\$13,200	\$27,200	\$0	\$0		\$40,400
2 Business Analysis and Strategic Plan	\$39,600	\$56,000	\$12,000	\$0		\$107,600
3 Technology and Operational Assessment	\$71,500	\$48,000	\$0	\$0		\$119,500
4 Reference Architecture	\$16,500	\$26,400	\$0	\$16,500		\$59,400
5 Human Resources and Organization	\$8,800	\$22,400	\$8,000	\$0		\$39,200
6 Development Road Map and Workplan	\$5,500	\$16,000	\$0	\$0		\$21,500
7 Regulatory analysis	\$0	\$1,600	\$0	\$0		\$1,600
8 Environmental analysis	\$0	\$800	\$0	\$0		\$800
9 Development impacts	\$0	\$1,600	\$0	\$0		\$1,600
10 Final Report and Workshop	\$11,000	\$20,000	\$0	\$0		\$31,000
Total Labor Cost Summary	\$166,100	\$220,000	\$20,000	\$16,500		\$422,600

Estimated additional and travel costs are as follows:

Other Direct Costs	Av. Daily Rate	Person Days	Total
CHIMA - Local consultants	\$400.00	175	\$70,000
			\$0
			\$0
			\$0
Sub total Outside Consultants			\$70,000

Misc. Inc. Tel & Fax	Number	Cost/Unit	Total
Telephone & Fax / month	6	\$500.00	\$3,000
Reproduction Draft Report			\$500
Reproduction Final Report			\$500
Binding Reports	4000	\$0.10	\$400
Local transportation	169	\$20.00	\$3,385
			\$0
Sub total Misc. Inc. Tel & Fax			\$7,785

Travel Expenses			
Air Fare	\$2,500.00	12	\$30,000
Per Diem Location (Chengdu)	\$211.00	169	\$35,712
Taxi To & From Airport	\$100.00	12	\$1,200
Travel contingency (5%)	5%		\$3,346
Sub total Airfare, Per Diem and Transportation			\$70,257

Total Other Direct Costs			\$148,042
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13.2 BUDGET NARRATIVE

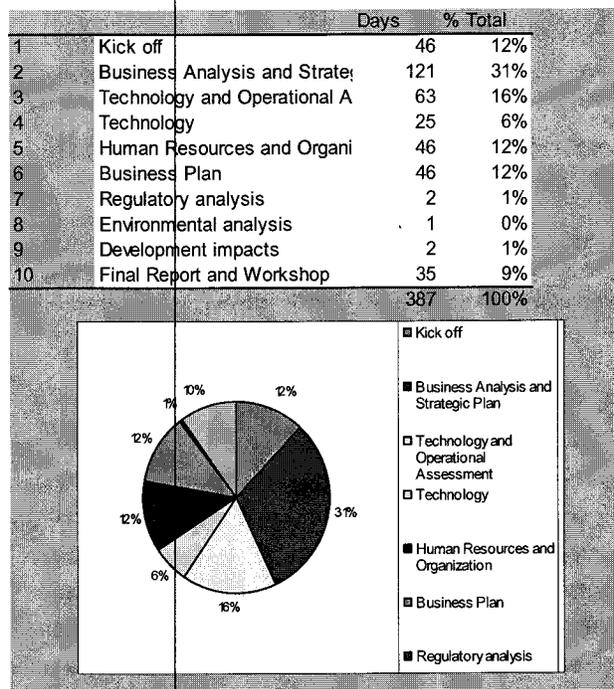
The budget for the *Regional Health Network and Services Strategy for Sichuan Province* project was prepared by Network Dynamics Associates. We crafted a draft terms of reference based on material discussions with the project sponsor, the Sichuan Health Information Bureau, as well as from discussions and recommendations made by Cisco. We also took into account draft proposals for studies related to EHR standards prepared by CHIMA as well as proprietary consulting proposals from U.S. companies active in the healthcare professional services sector. Network Dynamics independently prepared a detailed task list outlining the parameters for the present study, including objectives, key deliverables and milestones. SHIB was then asked to review and refine the scope of work.

To arrive at the budget, a detailed list of subtasks was developed. We provided a best effort estimate on the level of effort for each specific subject area as well as an estimate on the quantity and duration of travel required. The information was then compiled into a comprehensive list of required resources to obtain an overall list of expertise. We then estimated the hourly and daily costs for the experts required, thus arriving at the overall consultancy cost. All data was accumulated and summarized into tables to arrive at the concluding budget numbers for the entire project.

Budget Items

The “Labor” category in the budget includes all human resources and expertise required to accomplish the tasks. This category includes all of the Contractor’s direct hired employees, subcontractors and consultants. We assume that the Contractor’s team is comprised entirely of U.S. nationals, however we assume contractors will follow USDITA procurement rules regarding use of local contractors. For simplicity, we assigned four categories of professional experience - Senior Technical Consultant, Junior Technical Consultant, Corporate Strategy and Finance Consultant, and Legal, Regulatory and Policy Consultant – and assigned an average per diem compensation for their effort. Clearly companies will have their own calculation of costs. Our estimated break-down of resources by task area is as follows:

Resource by Task Area



The “Other Direct expenses” category includes provision for participation in the study by CHIMA, the China Hospital Information Management Association, a leading non-governmental organization and think-tank. CHIMA is an aggressive advocate of international standards in China’s healthcare sector. We have included them to complement the Contractor’s work due to their high degree of specific industry knowledge, professionalism, and shared objectives of adopting international best practices and technical standards for China’s healthcare sector. We also believe that CHIMA’s participation in the study will ensure high visibility of the study results in Beijing and nationwide, and that final recommendations are crafted in a manner that will achieve maximum impact in market-oriented reforms. We have allocated CHIMA a budget of \$70,000, based on an assumption of 175 man-days at \$400 per day.

The "Travel" category represents an estimate of the travel needed by the experts to accomplish the project tasks. We assume that the U.S. expert teams will be required to make a minimum of three trips to China of two weeks each. Certain experts may spend a greater or lesser amount of time in country, depending on the ability of the contractor to manage certain tasks remotely, and the specific tasks being performed by the individual. Contractors may also have experts already resident in China, and therefore not subject to travel reimbursement. We have budgeted for 12 round trip airfares from Washington DC to Chengdu. Airfare cost per trip is estimated at \$2500 per trip, with a total of about 170 man-days in country. The State Department's per diem estimate for Chengdu is \$211 per day. Per diem expenses were estimated using figures from State Department's overseas expenses index¹⁴ and travel expenses are based on educated estimates.

4.14. RECOMMENDATIONS

Network Dynamics recommends that USTDA proceed with the *Regional Health Network and Services Strategy for Sichuan Province* feasibility study. The healthcare sector in China is preparing to enter a stage of significant growth, fueled by reform-oriented funding from Beijing. ICT platforms, software and professional services are a strategic enabler for the policy to succeed. U.S. technology companies have made a strategic commitment to the sector and are competing aggressively against Chinese firms for market position. The study is designed to encourage adoption of international best practices and standards in healthcare ICT, thereby reducing non-tariff trade barriers and improving the competitive advantage of U.S. concerns. Successful deployment of U.S. solutions in Sichuan could influence national market trends and standards and lead to greater procurement over time as the country adopts national e-health services.

Additionally, the potential development impacts are considerable. Following the national vision, Sichuan hopes to dramatically improve healthcare quality and availability in poor rural areas by utilizing ICTs. This project will assist the Provincial government make a huge step forward in realizing this goal.

The greatest apparent risk to USTDA is assessing positive impact on U.S. trade. U.S. multinational corporations clearly stand to gain from direct sales of equipment and services. However, because the leading ICT companies manufacture systems within China, and professional services are provided by sector experts resident in country, it becomes difficult to calculate the U.S. interest and positive impact on U.S. labor. The question is so complicated, in fact, that it requires an economist to unravel the value chain to decipher the nature of U.S. content, a task for which Network Dynamics is not qualified. The Chinese of course do not make such distinctions. "Wins" by U.S. corporations will be viewed as "American" contributions to the market, and would arguably support U.S. national interest related to trade and soft political power.

¹⁴ http://aoprals.state.gov/web920/per_diem.asp

4.0 CONTACTS

IBM China Investment Company Limited	Wei Jay	Sun K.	Senior Manager, Research Staff Member	Diamond Building, ZGC	Software Park # 19, Dong	Shanghai	China	(86-10) 58748402	(86-10) 58748330	wesun@cn.ibm.com	March '09
CDC-GAP China Office	Eric	Varna	Director, International Emerging Infections Program	Suite 403-Dongwai Diplomatic Office	23 Dongzhimenwai Dajie	Beijing	China	(86-10) 8532-2633 ext. 8004	(86-10) 8532-2634		March '09
Commercial	Eric	Wolff	Commercial Consul	Post		Chengdu	China	86-28-85589642 Ext.6961	86-28-85589221	Eric.Wolff@mail.dcc.gov	March '09
GE	Kan-Wei	Wu	General Manager Southwest Region, China	Room 2011, Times Plaza	2 Zongfu Road, Chengdu	Chengdu	China	(8628) 8666 9617	(8628) 8665 3854	Kan-Wei.Wu@ge.com	March '09
Chengdu Software Industry Development Center	Li	Xin	Director	Addr. 1st Floor, No.8 Building tech incubation Park, Tianfu	H-Road, H-tech District, Chengdu	Chengdu	China	(028) 85335781	(028) 85336899-800	Lixinco@gmail.com	March '09
Sichuan Province Bureau of Information Industry	Yang	Xin	Cooperation Department In & Abroad	Post		Chengdu	China	(+86-28)86392025	(028) 86740914	yangxin@scit.gov.cn	March '09
China National Committee for Disaster Reduction	Wang	Xingling	Associate Professor	Addr. Room 1206, Zhong Min Plaza, NO.7 Baiguang Road Xuanwu District		Beijing	China	tel + 86-10-83551203	-83553747	wangxingling@ndrec.gov.cn	March '09
Information Industry Department of Sichuan Province	Yang	Xu	Vice-Director	Post		Chengdu	China	0086-28-86740251	0086-28-86740914	xuyang@scit.gov.cn	March '09
Cisco Systems (China) Networking Technology Co., Ltd.	Yu	Yi	Executive Director Corporate Social Responsibility	7-12/F Building C, Yintai Office Tower	Beijing Yintai Centre No. 2, Jianguomenwai	Beijing	China	(8610) 8515 5000		yuy@cisco.com	March '09
Sichuan Emergency Health Office	Yang	Yong	Department of Sichuan Province			Chengdu	China	Mk (Fax) : 028-86130403		y-yongd@163.com	March '09
Dorenfest Group	Grace	Zhuyuan YU	China Project Manager	NBC Tower, Suite 2725	455 N. Cityfront Plaza Drive	Chicago	United States	(312) 464-3000	(312) 467-0541	yuz@dorenfest.com	March '09
Ministry of Health - Department of Planning and Finance	Shili	Yu	Director - Division of Planning and Pricing	1, Xi Zhi Men Wai Nan Lu		Beijing	China	8610-6879-2155	8610-6879-2157	yus@moh.gov.cn	March '09
ESTH Section, U.S. Embassy, Beijing	Elizabeth	F. Yuan	Health Attache - HHS	55, An Jia Lou Road	Chao Yang District, 100600	Beijing	China	86-10-8531-3414	86-10-8531-3939	Yuanest@state.gov	March '09
IBM China Investment Company Limited	Pan	Yue	Senior Manager Information and Knowledge	Diamond Building, ZGC	Software Park # 19, Dong	Beijing	China	(86-10) 58748083	(86-10) 58748730	panyue@cn.ibm.com	March '09
Microsoft (China) Co., Ltd.	Quen	Zhang	Public Sector Healthcare Solution Manager	19F Hyundai Motor Tower	38 Xiaoyun Road, Chaoyang District	Beijing	China	(86-10) 5896-8179	(86-10) 5925-8588	quenzh@microsoft.com	March '09
Institute of Medical Informatics Chinese PLA General Hospital & Postgraduate Medical School	Junping	Zhao	Director	No. 28 Fuxing Road		Beijing	China	(8610) 6693 9773	(8610) 6693 9773	zhaopj@30hospital.com.cn	March '09
Institute of Medical-care Information Technology	Benjamin	Zheng	Chief Representative	P.C. : 310012	Hangzhou	Zhejiang	China	0571-28065838	0571-28065836	jie.zheng@imt.org.cn	March '09
IBM Global Services (China) Company Limited	She	Duan Zhi	Deputy Director	25/F, BM Tower	Pacific Century Place	Beijing	China	(86-10) 63612266	(86-10) 63618551	sbezd@cn.ibm.com	March '09
National Disaster Reduction Center of China	Yan	Zhuzhuang	Deputy Director	Room 1405, Zhong Min Plaza	No.7 Baiguang Road Xuanwu District	Beijing	China	+86-10-85351209 83559988-1404	83555088	yanzhizhuang@ndrec.gov.cn	March '09
120 Center of Chengdu	Yuan jin	Li	Party Secretary			Chengdu	China			hyj12133@126.com	March '09

ANNEX 3



U.S. TRADE AND DEVELOPMENT AGENCY Arlington, VA 22209-3901

NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS

The purpose of USTDA's nationality, source, and origin requirements is to assure the maximum practicable participation of American contractors, technology, equipment and materials in the prefeasibility, feasibility, and implementation stages of a project.

USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under this Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. consultant; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from host country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for implementation of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., lodging, food, and transportation) in host country are not subject to the above restrictions. USTDA will make available further details concerning these standards of eligibility upon request.

NATIONALITY:

1) Rule

Except as USTDA may otherwise agree, the Contractor for USTDA funded activities must be either a U.S. firm or a U.S. consultant. Prime contractors may utilize U.S. subcontractors, but the use of host country subcontractors is limited to 20% of the USTDA grant amount.

2) Application

Accordingly, only a U.S. firm or U.S. consultant may submit proposals on USTDA funded activities. Although those proposals may include subcontracting arrangements with host country firms or individuals for up to 20% of the USTDA grant amount, they may not include subcontracts with third country entities. U.S. firms submitting proposals must ensure that the professional services funded by the USTDA grant, to the extent not subcontracted to host country entities, are supplied by employees of the firm or employees of U.S. subcontractor firms who are U.S. individuals.

Interested U.S. firms and consultants who submit proposals must meet USTDA nationality requirements as of the due date for the submission of proposals and, if selected, must continue to meet such requirements throughout the duration of the USTDA-financed activity. These nationality provisions apply to whatever portion of the Terms of Reference is funded with the USTDA grant.

3) Definitions

A "U.S. individual" is (a) a U.S. citizen, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder).

A "U.S. consultant" is (a) a U.S. citizen whose principal place of business is in the United States, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder) whose principal place of business is in the U.S.

A "U.S. firm" is a privately owned firm which is incorporated in the U.S., with its principal place of business in the U.S., and which is either (a) more than 50% owned by U.S. individuals, or (b) has been incorporated in the U.S. for more than three (3) years prior to the issuance date of the request for proposals; has performed similar services in the U.S. for that three (3) year period; employs U.S. citizens in more than half of its permanent full-time positions in the U.S.; and has the existing capability in the U.S. to perform the work in question.

A partnership, organized in the U.S. with its principal place of business in the U.S., may also qualify as a "U.S. firm" as would a joint venture organized or incorporated in the United States consisting entirely of U.S. firms and/or U.S. individuals.

A nonprofit organization, such as an educational institution, foundation, or association may also qualify as a "U.S. firm" if it is incorporated in the United States and managed by a governing body, a majority of whose members are U.S. individuals.

SOURCE AND ORIGIN:

1) Rule

In addition to the nationality requirement stated above, any goods (e.g., equipment and materials) and services related to their shipment (e.g., international transportation and insurance) funded under the USTDA Grant Agreement must have their source and origin in the United States, unless USTDA otherwise agrees. However, necessary purchases of goods and project support services which are unavailable from a U.S. source (e.g., local food, housing and transportation) are eligible without specific USTDA approval.

2) Application

Accordingly, the prime contractor must be able to demonstrate that all goods and services purchased in the host country to carry out the Terms of Reference for a USTDA Grant Agreement that were not of U.S. source and origin were unavailable in the United States.

3) Definitions

“Source” means the country from which shipment is made.

“Origin” means the place of production, through manufacturing, assembly or otherwise.

Questions regarding these nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.



**U.S. TRADE AND DEVELOPMENT AGENCY
Arlington, VA 22209-2131**

NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS

The purpose of USTDA's nationality, source, and origin requirements is to assure the maximum practicable participation of American contractors, technology, equipment and materials in the prefeasibility, feasibility, and implementation stages of a project.

USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):

Except as USTDA may otherwise agree, each of the following provisions shall apply to the delivery of goods and services funded by USTDA under this Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from host country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for implementation of the Assistance and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Project support (e.g., local lodging, food, and transportation) in host country are not subject to the above restrictions. USTDA will make available further details concerning these standards of eligibility upon request.

NATIONALITY:

1) Rule

Except as USTDA may otherwise agree, the Contractor for USTDA funded activities must be either a U.S. firm or a U.S. individual. Prime contractors may utilize U.S.

subcontractors without limitation, but the use of host country subcontractors is limited to 20% of the USTDA grant amount.

2) Application

Accordingly, only a U.S. firm or U.S. individual may submit proposals on USTDA funded activities. Although those proposals may include subcontracting arrangements with host country firms or individuals for up to 20% of the USTDA grant amount, they may not include subcontracts with third country entities. U.S. firms submitting proposals must ensure that the professional services funded by the USTDA grant, to the extent not subcontracted to host country entities, are supplied by employees of the firm or employees of U.S. subcontractor firms who are U.S. individuals.

Interested U.S. firms and consultants who submit proposals must meet USTDA nationality requirements as of the due date for the submission of proposals and, if selected, must continue to meet such requirements throughout the duration of the USTDA-financed activity. These nationality provisions apply to whatever portion of the Terms of Reference is funded with the USTDA grant.

3) Definitions

A "U.S. individual" is (a) a U.S. citizen, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder).

A "U.S. firm" is a privately owned firm which is incorporated in the U.S., with its principal place of business in the U.S., and which is either (a) more than 50% owned by U.S. individuals, or (b) has been incorporated in the U.S. for more than three (3) years prior to the issuance date of the request for proposals; has performed similar services in the U.S. for that three (3) year period; employs U.S. citizens in more than half of its permanent full-time positions in the U.S.; and has the existing capability in the U.S. to perform the work in question.

A partnership, organized in the U.S. with its principal place of business in the U.S., may also qualify as a "U.S. firm" as would a joint venture organized or incorporated in the United States consisting entirely of U.S. firms and/or U.S. individuals.

A nonprofit organization, such as an educational institution, foundation, or association may also qualify as a "U.S. firm" if it is incorporated in the United States and managed by a governing body, a majority of whose members are U.S. individuals.

SOURCE AND ORIGIN:

1) Rule

In addition to the nationality requirement stated above, any goods (e.g., equipment and materials) and services related to their shipment (e.g., international transportation and insurance) funded under the USTDA Grant Agreement must have their source and origin in the United States, unless USTDA otherwise agrees. However, necessary purchases of goods and project support services which are unavailable from a U.S. source (e.g., local food, housing and transportation) are eligible without specific USTDA approval.

2) Application

Accordingly, the prime contractor must be able to demonstrate that all goods and services purchased in the host country to carry out the Terms of Reference for a USTDA Grant Agreement that were not of U.S. source and origin were unavailable in the United States.

3) Definitions

“Source” means the country from which shipment is made.

“Origin” means the place of production, through manufacturing, assembly or otherwise.

Questions regarding these nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.

ANNEX 4

GRANT AGREEMENT

This Grant Agreement is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA") and Sichuan Health Information Center ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Agreement US\$570,642 ("USTDA Grant") to fund the cost of goods and services required for technical assistance ("TA") on the proposed Sichuan Regional Health Network and Services Strategy ("Project") in the People's Republic of China ("Host Country").

1. USTDA Funding

The funding to be provided under this Grant Agreement shall be used to fund the costs of a contract between the Grantee and the U.S. firm selected by the Grantee ("Contractor") under which the Contractor will perform the TA ("Contract"). Payment to the Contractor will be made directly by USTDA on behalf of the Grantee with the USTDA Grant funds provided under this Grant Agreement.

2. Terms of Reference

The Terms of Reference for the TA ("Terms of Reference") are attached as Annex I and are hereby made a part of this Grant Agreement. The TA will examine the technical, financial, environmental, and other critical aspects of the proposed Project. The Terms of Reference for the TA shall also be included in the Contract.

3. Standards of Conduct

USTDA and the Grantee recognize the existence of standards of conduct for public officials, and commercial entities, in their respective countries. The parties to this Grant Agreement and the Contractor shall observe these standards, which include not accepting payment of money or anything of value, directly or indirectly, from any person for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the TA.

4. Grantee Responsibilities

The Grantee shall undertake its best efforts to provide reasonable support for the Contractor, such as local transportation, office space, and secretarial support.

5. USTDA as Financier

(A) USTDA Approval of Competitive Selection Procedures

Selection of the U.S. Contractor shall be carried out by the Grantee according to its established procedures for the competitive selection of contractors with advance notice of the procurement published online through *Federal Business Opportunities* (www.fedbizopps.gov). Upon request, the Grantee will submit these contracting procedures and related documents to USTDA for information and/or approval.

(B) USTDA Approval of Contractor Selection

The Grantee shall notify USTDA at the address of record set forth in Article 17 below upon selection of the Contractor to perform the TA. Upon approval of this selection by USTDA, the Grantee and the Contractor shall then enter into a contract for performance of the TA. The Grantee shall notify in writing the U.S. firms that submitted unsuccessful proposals to perform the TA that they were not selected.

(C) USTDA Approval of Contract Between Grantee and Contractor

The Grantee and the Contractor shall enter into a contract for performance of the TA. This contract, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing. To expedite this approval, the Grantee (or the Contractor on the Grantee's behalf) shall transmit to USTDA, at the address set forth in Article 17 below, a photocopy of an English language version of the signed contract or a final negotiated draft version of the contract.

(D) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of the contract and any amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the TA and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Grantee or USTDA from asserting any right they might have against the

Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Grantee or USTDA.

(E) Grant Agreement Controlling

Regardless of USTDA approval, the rights and obligations of any party to the contract or subcontract thereunder must be consistent with this Grant Agreement. In the event of any inconsistency between the Grant Agreement and any contract or subcontract funded by the Grant Agreement, the Grant Agreement shall be controlling.

6. Disbursement Procedures

(A) USTDA Approval of Contract Required

USTDA will make disbursements of Grant funds directly to the Contractor only after USTDA approves the Grantee's contract with the Contractor.

(B) Contractor Invoice Requirements

The Grantee should request disbursement of funds by USTDA to the Contractor for performance of the TA by submitting invoices in accordance with the procedures set forth in the USTDA Mandatory Clauses in Annex II.

7. Effective Date

The effective date of this Grant Agreement ("Effective Date") shall be the date of signature by both parties or, if the parties sign on different dates, the date of the last signature.

8. TA Schedule

(A) TA Completion Date

The completion date for the TA, which is January 30, 2011, is the date by which the parties estimate that the TA will have been completed.

(B) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this Grant Agreement for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

9. USTDA Mandatory Clauses

All contracts funded under this Grant Agreement shall include the USTDA mandatory clauses set forth in Annex II to this Grant Agreement. All subcontracts funded or partially funded with USTDA Grant funds shall include the USTDA mandatory clauses, except for clauses B(1), G, H, I, and J.

10. Use of U.S. Carriers

(A) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(B) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

11. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the TA and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to TA support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

12. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country. Neither the Grantee nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees or other levies.

13. Cooperation Between Parties and Follow-Up

The parties will cooperate to assure that the purposes of the Grant Agreement are accomplished. For five (5) years following receipt by USTDA of the Final Report (as defined in Clause I of Annex II), the Grantee agrees to respond to any reasonable inquiries from USTDA about the status of the Project.

14. Implementation Letters

To assist the Grantee in the implementation of the TA, USTDA may, from time to time, issue implementation letters that will provide additional information about matters covered by the Grant Agreement. The parties may also use jointly agreed upon implementation letters to confirm and record their mutual understanding of matters covered by the Grant Agreement.

15. Recordkeeping and Audit

The Grantee agrees to maintain books, records, and other documents relating to the TA and the Grant Agreement adequate to demonstrate implementation of its responsibilities under the Grant Agreement, including the selection of contractors, receipt and approval of contract deliverables, and approval or disapproval of contractor invoices for payment by USTDA. Such books, records, and other documents shall be separately maintained for three (3) years after the date of the final disbursement by USTDA. The Grantee shall afford USTDA or its authorized representatives the opportunity at reasonable times to review books, records, and other documents relating to the TA and the Grant Agreement.

16. Representation of Parties

For all purposes relevant to the Grant Agreement, the Government of the United States of America will be represented by the U. S. Ambassador to Host Country or USTDA and Grantee will be represented by Gan HuaPing, Director. The parties hereto may, by written notice, designate additional representatives for all purposes under the Grant Agreement.

17. Addresses of Record for Parties

Any notice, request, document, or other communication submitted by either party to the other under the Grant Agreement shall be in writing or through a wire or electronic medium which produces a tangible record of the transmission, such as a telegram, cable or facsimile, and will be deemed duly given or sent when delivered to such party at the following:

To: Sichuan Health Information Center
80 Wen Miao Street
Chengdu, Sichuan 610041
P.R. China

Phone: (011) 86 (28) 8613-8790 or +86 131 9850 1689

Fax: (011) 86 (28) 8613-8790

To: U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: +1 (703) 875-4357

Fax: +1 (703) 875-4009

All such communications shall be in English, unless the parties otherwise agree in writing. In addition, the Grantee shall provide the Commercial Section of the U.S. Embassy in Host Country with a copy of each communication sent to USTDA.

Any communication relating to this Grant Agreement shall include the following fiscal data:

Appropriation No.: 11 9/10 1001

Activity No.: 2009-31049A

Reservation No.: 2009310071

Grant No.: GH2009310016

18. Termination Clause

Either party may terminate the Grant Agreement by giving the other party thirty (30) days advance written notice. The termination of the Grant Agreement will end any obligations of the parties to provide financial or other resources for the TA, except for payments which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the written notice of termination.

19. Non-waiver of Rights and Remedies

No delay in exercising any right or remedy accruing to either party in connection with the Grant Agreement shall be construed as a waiver of such right or remedy.

20. U.S. Technology and Equipment

By funding this TA, USTDA seeks to promote the project objectives of the Host Country through the use of U.S. technology, goods, and services. In recognition of this purpose, the Grantee agrees that it will allow U.S. suppliers to compete in the procurement of technology, goods and services needed for Project implementation.

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IN WITNESS WHEREOF, the Government of the United States of America and the Sichuan Health Information Center, each acting through its duly authorized representative, have caused this Agreement to be signed in the English language in their names and delivered as of the day and year written below. In the event that this Grant Agreement is signed in more than one language, the English language version shall govern.

**For the Government of the
United States of America**

By: _____

Date: _____

Witnessed:

By: _____

**For the Sichuan Health
Information Center**

By: _____

Date: _____

Witnessed:

By: _____

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Clauses

Annex II

USTDA Mandatory Contract Clauses

A. USTDA Mandatory Clauses Controlling

The parties to this contract acknowledge that this contract is funded in whole or in part by the U.S. Trade and Development Agency ("USTDA") under the Grant Agreement between the Government of the United States of America acting through USTDA and Sichuan Health Information Center ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the technical assistance ("TA") for the Sichuan Regional Health Network and Services Strategy project ("Project") in the People's Republic of China ("Host Country"). Notwithstanding any other provisions of this contract, the following USTDA mandatory contract clauses shall govern. All subcontracts entered into by Contractor funded or partially funded with USTDA Grant funds shall include these USTDA mandatory contract clauses, except for clauses B(1), G, H, I, and J. In addition, in the event of any inconsistency between the Grant Agreement and any contract or subcontract thereunder, the Grant Agreement shall be controlling.

B. USTDA as Financier

(1) USTDA Approval of Contract

All contracts funded under the Grant Agreement, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing in order to be effective with respect to the expenditure of USTDA Grant funds. USTDA will not authorize the disbursement of USTDA Grant funds until the contract has been formally approved by USTDA or until the contract conforms to modifications required by USTDA during the contract review process.

(2) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of this contract and amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of financing the TA and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Client or USTDA from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Client or USTDA.

C. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the TA and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to TA support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

D. Recordkeeping and Audit

The Contractor and subcontractors funded under the Grant Agreement shall maintain, in accordance with generally accepted accounting procedures, books, records, and other documents, sufficient to reflect properly all transactions under or in connection with the contract. These books, records, and other documents shall clearly identify and track the use and expenditure of USTDA funds, separately from other funding sources. Such books, records, and documents shall be maintained during the contract term and for a period of three (3) years after final disbursement by USTDA. The Contractor and subcontractors shall afford USTDA, or its authorized representatives, the opportunity at reasonable times for inspection and audit of such books, records, and other documentation.

E. U.S. Carriers

(1) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(2) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

F. Workman's Compensation Insurance

The Contractor shall provide adequate Workman's Compensation Insurance coverage for work performed under this Contract.

G. Reporting Requirements

The Contractor shall advise USTDA by letter as to the status of the Project on March 1st annually for a period of two (2) years after completion of the TA. In addition, if at any time the Contractor receives follow-on work from the Client, the Contractor shall so notify USTDA and designate the Contractor's contact point including name, telephone, and fax number. Since this information may be made publicly available by USTDA, any information which is confidential shall be designated as such by the Contractor and provided separately to USTDA. USTDA will maintain the confidentiality of such information in accordance with applicable law.

H. Disbursement Procedures

(1) USTDA Approval of Contract

Disbursement of Grant funds will be made only after USTDA approval of this contract. To make this review in a timely fashion, USTDA must receive from either the Client or the Contractor a photocopy of an English language version of a signed contract or a final negotiated draft version to the attention of the General Counsel's office at USTDA's address listed in Clause M below.

(2) Payment Schedule Requirements

A payment schedule for disbursement of Grant funds to the Contractor shall be included in this Contract. Such payment schedule must conform to the following USTDA requirements: (1) up to twenty percent (20%) of the total USTDA Grant amount may be used as a mobilization payment; (2) all other payments, with the exception of the final payment, shall be based upon contract performance milestones; and (3) the final payment may be no less than fifteen percent (15%) of the total USTDA Grant amount, payable upon receipt by USTDA of an approved Final Report in accordance with the specifications and quantities set forth in Clause I below. Invoicing procedures for all payments are described below.

(3) Contractor Invoice Requirements

USTDA will make all disbursements of USTDA Grant funds directly to the Contractor. The Contractor must provide USTDA with an ACH Vendor Enrollment Form (available from USTDA) with the first invoice. The Client shall request disbursement of funds by USTDA to the Contractor for performance of the contract by submitting the following to USTDA:

(a) Contractor's Invoice

The Contractor's invoice shall include reference to an item listed in the Contract payment schedule, the requested payment amount, and an appropriate certification by the Contractor, as follows:

- (i) For a mobilization payment (if any):

"As a condition for this mobilization payment, the Contractor certifies that it will perform all work in accordance with the terms of its Contract with the Client. To the extent that the Contractor does not comply with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA. "

(ii) For contract performance milestone payments:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(iii) For final payment:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. Specifically, the Contractor has submitted the Final Report to the Client, as required by the Contract, and received the Client's approval of the Final Report. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(b) Client's Approval of the Contractor's Invoice

(i) The invoice for a mobilization payment must be approved in writing by the Client.

(ii) For contract performance milestone payments, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement."

(iii) For final payment, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and terms and conditions of the USTDA Grant Agreement. The Final Report submitted by the Contractor has been reviewed and approved by the Client. "

(c) USTDA Address for Disbursement Requests

Requests for disbursement shall be submitted by courier or mail to the attention of the Finance Department at USTDA's address listed in Clause M below.

(4) Termination

In the event that the Contract is terminated prior to completion, the Contractor will be eligible, subject to USTDA approval, for reasonable and documented costs which have been incurred in performing the Terms of Reference prior to termination, as well as reasonable wind down expenses. Reimbursement for such costs shall not exceed the total amount of undisbursed Grant funds. Likewise, in the event of such termination, USTDA is entitled to receive from the Contractor all USTDA Grant funds previously disbursed to the Contractor (including but not limited to mobilization payments) which exceed the reasonable and documented costs incurred in performing the Terms of Reference prior to termination.

I. USTDA Final Report

(1) Definition

"Final Report" shall mean the Final Report described in the attached Annex I Terms of Reference or, if no such "Final Report" is described therein, "Final Report" shall mean a substantive and comprehensive report of work performed in accordance with the attached Annex I Terms of Reference, including any documents delivered to the Client.

(2) Final Report Submission Requirements

The Contractor shall provide the following to USTDA:

(a) One (1) complete version of the Final Report for USTDA's records. This version shall have been approved by the Client in writing and must be in the English language. It is the responsibility of the Contractor to ensure that confidential information, if any, contained in this version be clearly marked. USTDA will maintain the confidentiality of such information in accordance with applicable law.

and

(b) One (1) copy of the Final Report suitable for public distribution ("Public Version"). The Public Version shall have been approved by the Client in writing and must be in the English language. As this version will be available for public distribution, it must not contain any confidential information. If the report in (a) above contains no confidential information, it may be used as the Public Version. In any event, the Public Version must be informative and contain sufficient Project detail to be useful to prospective equipment and service providers.

and

(c) Two (2) CD-ROMs, each containing a complete copy of the Public Version of the Final Report. The electronic files on the CD-ROMs shall be submitted in a commonly accessible read-only format. As these CD-ROMs will be available for public distribution, they must not contain any confidential information. It is the

responsibility of the Contractor to ensure that no confidential information is contained on the CD-ROMs.

The Contractor shall also provide one (1) copy of the Public Version of the Final Report to the Foreign Commercial Service Officer or the Economic Section of the U.S. Embassy in Host Country for informational purposes.

(3) Final Report Presentation

All Final Reports submitted to USTDA must be paginated and include the following:

(a) The front cover of every Final Report shall contain the name of the Client, the name of the Contractor who prepared the report, a report title, USTDA's logo, USTDA's mailing and delivery addresses. If the complete version of the Final Report contains confidential information, the Contractor shall be responsible for labeling the front cover of that version of the Final Report with the term "Confidential Version." The Contractor shall be responsible for labeling the front cover of the Public Version of the Final Report with the term "Public Version." The front cover of every Final Report shall also contain the following disclaimer:

"This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U. S. Government. The opinions, findings, conclusions or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report."

(b) The inside front cover of every Final Report shall contain USTDA's logo, USTDA's mailing and delivery addresses, and USTDA's mission statement. Camera-ready copy of USTDA Final Report specifications will be available from USTDA upon request.

(c) The Contractor shall affix to the front of the CD-ROM a label identifying the Host Country, USTDA Activity Number, the name of the Client, the name of the Contractor who prepared the report, a report title, and the following language:

"The Contractor certifies that this CD-ROM contains the Public Version of the Final Report and that all contents are suitable for public distribution."

(d) The Contractor and any subcontractors that perform work pursuant to the Grant Agreement must be clearly identified in the Final Report. Business name, point of contact, address, telephone and fax numbers shall be included for Contractor and each subcontractor.

(e) The Final Report, while aiming at optimum specifications and characteristics for the Project, shall identify the availability of prospective U.S. sources of supply.

Business name, point of contact, address, telephone and fax numbers shall be included for each commercial source.

(f) The Final Report shall be accompanied by a letter or other notation by the Client which states that the Client approves the Final Report. A certification by the Client to this effect provided on or with the invoice for final payment will meet this requirement.

J. Modifications

All changes, modifications, assignments or amendments to this contract, including the appendices, shall be made only by written agreement by the parties hereto, subject to written USTDA approval.

K. TA Schedule

(1) TA Completion Date

The completion date for the TA, which is January 30, 2011, is the date by which the parties estimate that the TA will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this contract for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

L. Business Practices

The Contractor agrees not to pay, promise to pay, or authorize the payment of any money or anything of value, directly or indirectly, to any person (whether a governmental official or private individual) for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the TA. The Client agrees not to receive any such payment. The Contractor and the Client agree that each will require that any agent or representative hired to represent them in connection with the TA will comply with this paragraph and all laws which apply to activities and obligations of each party under this Contract, including but not limited to those laws and obligations dealing with improper payments as described above.

M. USTDA Address and Fiscal Data

Any communication with USTDA regarding this Contract shall be sent to the following address and include the fiscal data listed below:

U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600

Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

Fiscal Data:

Appropriation No.: 11 9/10 1001
Activity No.: 2009-31049A
Reservation No.: 2009310071

Grant No.: GH2009310016

N. Definitions

All capitalized terms not otherwise defined herein shall have the meaning set forth in the Grant Agreement.

O. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country. Neither the Client nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees or other levies.

(2/28/08 version)

ANNEX 5

TERMS OF REFERENCE

1.0 Purpose and objective of the Technical Assistance

The Project will provide strategic and technical advisory services related to establishing a regional healthcare information network for the Grantee. The Grantee requests assistance to formulate a long-range strategy for next-generation healthcare services; define the applications and services required to significantly upgrade healthcare services in Sichuan; articulate the technical parameters for electronic health records (EHR) and a regional health information network (RHIN); correlate the services strategy with planned investments in data centers and telecommunications facilities; and outline a clear future work plan for additional initiatives anticipated over time.

2.0 Tasks and Deliverables

The Contractor shall assist the Grantee to develop its long-term strategy and near-term action plan for applications, services and business sustainability for regional e-healthcare services in the Province. The efforts will combine strategic management consultancy with a technical assessment and definition of the applications, protocols and formats for Sichuan's healthcare data, taking into consideration the desire to ensure conformity with relevant international and national healthcare standards. The Contractor shall review the proposed technical architecture for regional data centers and telecommunications facilities to ensure that the anticipated infrastructure investments are appropriately scaled for the applications the services recommended. The Contractor shall provide a roadmap for action steps to be taken to help the Grantee and chart its priorities over time. The recommendations shall be sufficiently detailed to enable the Grantee to initiate pilot projects on its own or with investment partners, and to secure government funding for its development agenda.

The Contractor may wish to consider engaging the Chinese Hospital Association (CHA) as a local consultant to assist with analysis and recommendations. Provision has been made in the project budget for a local consultant.

The following are the project tasks and key deliverables:

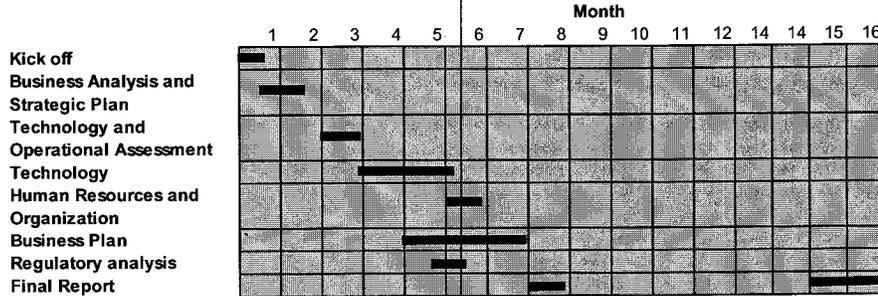
Task 1: Kick off

1.1 Project kick-off: The Contractor shall:

- Meet with the Grantee to discuss overall project strategy, objectives and deliverables.
- Further communicate, clarify and refine project objectives and scope.
- Form joint project team with the Grantee and CHA and define roles and responsibilities.
- Prepare project plan and develop project guides with guidance from the Grantee.
- Define project approach and methodology, documentation standards, project management reporting requirements, and identify data collection requirements.

1.2 Task Completion Schedule. The Contractor shall prepare a detailed task completion schedule to be agreed upon with the Grantee within 10 days of the project kick-off meeting. The project production schedule below is representative and non-binding. It provides an overview of the perceived sequencing of the project, namely, that core technological issues need to be addressed first, followed by operational business planning.

Sichuan EHR/RHIN - High-Level Timeline



1.3 Project launch meeting: The Contractor shall conduct the launch with the project team, key stakeholders, management team and partners to communicate, confirm project objectives and define roles and responsibilities.

1.4 Situation analysis: The Contractor shall:

- Review relevant research materials and policy documents.
- Assess existing health system management techniques, control mechanisms, core business and IT practices, and other practices unique to Sichuan.
- Review all relevant Grantee data related to current healthcare IT usage in Sichuan.
- Identify potential operational capacity and resources and analyze the critical success factors with a focus on IT-related considerations.

Task 1 Deliverables:

Inception report: The Contractor shall:

- Prepare a detailed project plan, including a summary of initial observations and the situation analysis.
- Provide detailed requests for information to be provided to the Grantee and other relevant Sichuan governmental organizations that the Grantee or the Contractor determines to be essential to making a comprehensive assessment.
- Prepare Phase I Interview plan (a matrix of organizations and contacts) and Interview guides (a structured format to guide and direct research interviews) for interviews to be carried out under Tasks 2 and 3.

Task 2: Business Analysis and Strategic Plan

Objective: Define the mission, vision and long-term strategy for regional e-healthcare services in Sichuan

2.1 Evaluate market structure: The Contractor shall assess the existing service delivery value chain for healthcare service in Sichuan Province and recommend optimal scenarios for

future regional e-healthcare services based on EHR, including the potential roles of public vs. private players in the market. The Contractor shall analyze cost factors for service delivery (the flow of money and remuneration within the system) and identify opportunities for the various stakeholders. The Contractor shall prepare an analysis of sufficient economic detail to inform policy makers and stakeholders on key strategic choices and sustainability options.

2.2 Stakeholder interviews and value proposition: The Contractor shall interview no fewer than 20 senior provincial government leaders and related stakeholders to understand constituent views regarding EHR and related applications. The Contractor shall interview key functional department staffs including technology, finance, medical etc. to understand the local service delivery and business environment, prioritized core business processes, and operation status. The Contractor shall analyze the value proposition for EHR from competitive perspectives identified in order to arrive at a preferred and/or consensus recommendation.

2.3 Strategy plan and Services roadmap: The Contractor shall develop a regional e-Healthcare services roadmap, including detailed descriptions of potential services, service dependencies over time (building blocks required to provision), as well as operational and technical requirements needed to support the services. The Contractor shall specifically provide service descriptions and program roadmaps for leading applications such as: 1) community/rural clinic support 2) EHR-based clinical support; 3) teleradiology; 4) medical research support; 5) insurance; 6) remote video services; 7) pharmaceutical regulations support; 8) Chinese traditional medicine support; and other applications (a maximum of 10) as defined by the project team and the Grantee.

2.4 Analyze cost factors: The Contractor shall analyze cost factors for service delivery (the flow of money and remuneration within the system) and identify cost/benefit options and opportunities for the various stakeholders. The Contractor shall prepare an analysis of sufficient economic detail to inform policy makers and stakeholders on key strategic choices and sustainability options.

2.5 Business model feasibility structure: The Contractor shall assess the existing service delivery value chain and recommend optimal scenarios for future regional e-healthcare services based on EHR, including the potential roles of public vs. private players in the market. The Contractor shall identify and analyze strategic business and technology issues associated with the cost of service provisioning and economic sustainability over time, such as maintenance and technical support. The Contractor shall prepare an analysis of the primary strategic options for sector development and recommended policy decision framework. The Contractor shall recommend the optimal market participation and ownership model for the sustainability of the new services.

Task 2 Deliverables:

Business Plan: The Contractor shall prepare a business plan for EHR/RHIN services in Sichuan according to internationally-accepted formats and norms and in sufficient detail (not fewer than 50 pages) to provide provincial leaders with a long term development strategy and clear roadmap for sector development. The Plan shall specifically include all of the subtasks above and an Economic and Financial Analysis that addresses:

- budget required to procure and install the recommended system/equipment
- ongoing maintenance costs
- lifecycle costs
- likely operational fees or revenues that could offset the cost of investment
- execution risks and mitigation strategy, including the issue of access to implementation financing.

Workshop: The Contractor shall organize and conduct a 1-day workshop at the Grantee's facilities in Chengdu for at least 20 and up to 50 participants from the Grantee, the Sichuan government and interested U.S. technology companies to convey findings and seek strategic feedback.

Task 3 Technology and Operational Assessment

Objective: Analyze and assess regional EHR system and formulate the architecture and guidelines for the future Sichuan health information system and applications.

3.1 Technology assessment: The Contractor shall catalog and perform an assessment of existing IT applications, infrastructure, and management procedures, identifying current advantages, disadvantages and limitations of the networks and application platforms currently deployed.

3.2 Technical data collection and interviews: The Contractor shall collect technical data and conduct interviews with no fewer than 20 department managers, IT staff and selected internal Grantee end-users, focusing specifically on technology needs and requirements.

3.3 EHR functional architecture design: The Contractor shall prepare a draft EHR functional specification, incorporating international technical standards to the greatest extent possible such as DICOM (Digital Imaging and Communications in Medicine), HL7 (Health Level 7), IHE (Integrating the Healthcare Enterprise), etc., to cover, at a minimum: assessment of functional requirements; scenario and protocol use-case analysis; definition of functional components; EHR data set and standards; and other topics to be agreed upon by the Grantee and the Contractor.

3.4 Inter-operability Model: The Contractor shall prepare a strategic approach that provides the optimal design in response to the expressed needs and resources of the Grantee and shall prepare a technical model of the information architecture needed to support EHR application interoperability utilizing international standards in the China market context. The Contractor shall collect data as required.

3.5 EHR information architecture: The Contractor shall develop a design for the information architecture required to support the recommended EHR deployment including, but not limited to: as-is system context analysis; architecture options analysis; EHR platform design; EHR application design; integration protocol and profile; and high-level architecture and designs.

3.6 Security: The Contractor shall evaluate technical options for data security at the network, data center, service and application levels. On a policy and legal level, the Contractor shall

summarize strategic issues related to personal privacy protection and identify gaps and shortcomings in existing policies and regulations.

Task 3 Deliverables:

Interim Report: The Contractor shall deliver an interim technical report, which shall detail all of the subtasks listed above and include the following documents 1) EHR requirements report; 2) EHR Functional Architecture Design; 3) Interoperability technical report; 4) EHR architecture design; 5) EHR application architecture design; 6) Inter-operability model and protocols; and 7) Summary technical report on the above.

Technical workshop: The Contractor shall conduct a one-day workshop at Grantee facilities in Chengdu for up to 25 technical specialists and project managers on findings to date, and specifically address findings from the technical research and recommendations.

Task 4: Reference Architecture

Objective: Evaluate reference architecture for EHR data center and RHIN to meet application, services and investment expectations

4.1 Data center: The Contractor shall evaluate the data center architecture concepts and deployment plans developed by the Grantee and its information technology suppliers under active consideration and review. The Contractor shall correlate findings and recommendations for EHR strategy, applications and technology plans from Tasks 2 and 3 to proposed scope and scale of physical network, storage and computing platforms. The Contractor shall provide an independent and objective assessment of technology solutions and investment requirements proposed by prospective vendors to the Grantee. The Contractor shall recommend modifications and amendments to the architecture and budget as necessary to optimally meet the Grantee's strategic needs.

4.2 Regional health information network: As with the data center, the Contractor shall prepare an evaluation and assessment of the planned RHIN architecture and strategic services and applications roadmap and correlate the architecture with business and service expectations.

4.3 Financial analysis: The Contractor shall prepare a high-level 5-year estimate of the capital and operational costs required to implement the proposed facilities, based on the Grantee's stated coverage targets, including growth of the system to include new users and applications over time. The analysis shall further determine if the Grantee's allocated financial resources and external financial arrangements are sufficient to cover the cost of the project through to the full implementation phase, including ongoing running costs. The Contractor shall make an assessment of the risks associated with not receiving implementation financing from the Central or Provincial governments, and/or alternative sources. This section shall consider the possibility of alternative ownership schemes, for example, public-private partnerships, and availability of financing from public, private and multilateral financing organizations such as the World Bank, Asian Development Bank and others, as appropriate. The Contractor shall identify and evaluate business and financial issues related to the cost of ownership for new regional e-healthcare services, economic

sustainability, and service provisioning models (e.g., government vs. private; types of provisioning agencies, etc.).

Task 4 Deliverable: The Contractor shall prepare a technical report covering all of the subtasks described above including: inventory and assessment of as-is network and IT infrastructure relevant to the proposed EHR/RHIN platform; technical diagram of reference architecture; 3-year technical roadmap to transition existing infrastructure to proposed solution. The Contractor shall provide a detailed explanation of assumptions and description of its analytic process.

Task 5: Human Resources and Organization

Objective: Identify optimal organizational structure and human resource requirements to successfully implement EHR vision and strategy in Sichuan.

5.1 Organizational structure: The Contractor shall recommend specific adjustments to the Grantee's organizational structure to ensure the long term success of EHR/RHIN projects. The Contractor shall identify possible collaborative structures and mechanisms with other Sichuan Provincial organizations to facilitate take-up and adoption of EHR services.

5.2 Technology capabilities analysis: The Contractor shall survey and assess the Grantee's IT organizational resources and human resources required to implement an EHR framework. The Contractor shall perform a skills gap analysis and recommend areas for immediate and medium-term improvement as well as long term development of skills necessary for an EHR framework.

Task 5 Deliverable: The Contractor shall incorporate the subtasks described above and prepare a high-level aggregate assessment of human resource skills and training requirements and recommend priority areas for training over time.

Task 6: Regulatory analysis

Deliverable: The Contractor shall prepare a review of international, national and local regulatory issues and discuss any laws, statutes, or regulations that would impact the project's viability or prognosis to move forward. The Contractor shall take particular note of issues related to data security and personal privacy, as well as any mitigating factors related to adoption of healthcare standards.

Task 7: Environmental analysis

Deliverable: The Contractor shall make a preliminary review of the project's anticipated impact on the environment with reference to local requirements and those of multilateral lending agencies (such as the World Bank). The Contractor's review shall identify potential negative impacts, discuss the extent to which they can be mitigated, and develop plans for a full environmental impact assessment if and when the project moves forward to the implementation stage.

Task 8: Development impacts

The Contractor shall provide an analysis of key host country development impacts related to Infrastructure, Market Oriented Reform, Human Capacity Building, Technology Transfer and Productivity Improvement and Other. These Development Impact factors are intended to provide USTDA and the Grantee with a broader view of the project's potential effects on the Host Country. The Contractor's analysis shall focus on what Development Impact is likely if the project is implemented according to the Contractor's recommendations. While specific focus shall be paid to the immediate impact of the project, the Contractor's analysis shall include any additional developmental benefits that may result from the project's implementation, including spin-off and demonstration effects. Accordingly, the Contractor's analysis shall include an assessment of each of the following categories with respect to the project's potential Development Impact:

- (1) Infrastructure: Provide a statement on the infrastructure impact, giving a brief synopsis. For example, how will the Grantee's regional health information network, data centers and services improve delivery of healthcare services in Sichuan? Other issues as appropriate shall also be identified.
- (2) Market- Oriented Reform: Provide a description of any regulations, laws, or institutional changes that are recommended and the effect they would have if implemented, including leading to adoption and /or customization of international healthcare data standards for China. Provide examples of new market-oriented businesses that may emerge as a result of the EHR/RHIN reform strategy in Sichuan.
- (3) Human Capacity Building: The Contractor shall assess the number and type of local positions that would be needed to construct and operate the proposed project, as well as the number of local people who would receive training, and describe the training program.
- (4) Technology Transfer and Productivity Enhancement: Provide a description of any advanced technologies that would be utilized as a result of the project, and a description of any efficiency that would be gained.
- (5) Economic Impacts: The Contractor shall explore and briefly report on any positive economic impacts that may be produced from the technical assistance for the Grantee. The Contractor shall seek to identify and if possible, quantify, economic benefits resulting from the program. The assessment shall be made to the best of Contractor's internal abilities and utilizing existing subject matter expertise. An exhaustive econometric forecast and analysis is not required. Potential positive economic impacts may include:
 - Lowering cost of access to healthcare services;
 - Impacts of higher quality healthcare services in poor areas
 - Direct job creation at the Grantee
 - Secondary job creation from rapid and widespread distribution of regional e-health services in Sichuan; and
 - Other potential economic benefits or savings.
- (6) Other: Describe any other developmental impacts or benefits that would result from the project, for example, extension of services and applications over time, secondary benefits on social factors, and other considerations as appropriate.

For specific information regarding USTDA's Development Impact goals and measures, please contact the Contracting Officer (COTR) at USTDA, or see the Guidance on USTDA Development Impact Measures at www.ustda.gov/resources.

Task 8 Deliverable: The Contractor shall prepare an analysis of the impacts described above and include the findings in the Final Report.

Task 9: U.S. Sources of Supply

Deliverable: The Contractor shall conduct an assessment of the availability of potential U.S. sources of supply for equipment and services associated with the project. Business name, point of contact, address, telephone, e-mail, and fax numbers shall be included for each source.

Task 10: Final Report and Workshop

10.1 Deliverable: Final Workshop: The Contractor shall conduct a 2-day workshop at Grantee facilities presenting key findings and results and recommend near- and medium-term action plans.

10.2 Deliverable: Final report:

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be in English and in Chinese and be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

Notes:

- (1) The Contractor is responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.
- (2) The Contractor and the Grantee shall be careful to ensure that the public version of the Final Report contains no security or confidential information.
- (3) The Grantee and USTDA shall have an irrevocable, worldwide, royalty-free, non-exclusive right to use and distribute the Final Report and all work product that is developed under these Terms of Reference.

7. Project Manager's name, address, telephone number, e-mail address and fax number .

B. Offeror's Authorized Negotiator

Provide name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

C. Negotiation Prerequisites

1. Discuss any current or anticipated commitments which may impact the ability of the Offeror or its subcontractors to complete the Technical assistance as proposed and reflect such impact within the project schedule.

2. Identify any specific information which is needed from the Grantee before commencing contract negotiations.

D. Offeror's Representations

Please provide exceptions and/or explanations in the event that any of the following representations cannot be made:

1. Offeror is a corporation [*insert applicable type of entity if not a corporation*] duly organized, validly existing and in good standing under the laws of the State of _____ . The Offeror has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the Technical assistance. The Offeror is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment, or ineligible for the award of contracts by any federal or state governmental agency or authority. The Offeror has included, with this

proposal, a certified copy of its Articles of Incorporation, and a certificate of good standing issued within one month of the date of its proposal by the State of _____.

2. Neither the Offeror nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.
3. Neither the Offeror, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.
4. There are no federal or state tax liens pending against the assets, property or business of the Offeror. The Offeror, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.
5. The Offeror has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The Offeror has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected Offeror shall notify the Grantee and USTDA if any of the representations included in its proposal are no longer true and correct at the time of its entry into a contract with the Grantee. USTDA retains the right to request an updated certificate of good standing from the selected Offeror.

Signed: _____
(Authorized Representative)

Print Name: _____

Title: _____

Date: _____

EVENTS > TURKEY BUSINESS AND INVESTMENT SUMMIT 2010

Turkey Business and Investment Summit 2010

Investing in Turkey's Regions

Istanbul - Istanbul Conrad Hotel - 03.03.2010-04.03.2010

Main information and Partners

[Introduction](#)

[Programme and speakers](#)

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[Registration form \(pdf\)](#)

[Agenda \(pdf\)](#)

Main information

Title:

Turkey Business and Investment Summit 2010
Investing in Turkey's Regions

Date:

03.03.2010-04.03.2010

Location:

Istanbul - Istanbul Conrad Hotel

Brief description:

Featuring current Government incentives system made available through the Regional Development Agencies in the Turkish Investment Zones

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