

Centralized Data Hosting Model for Cross-Cultural Surveys: Saudi National Health and Stress Study

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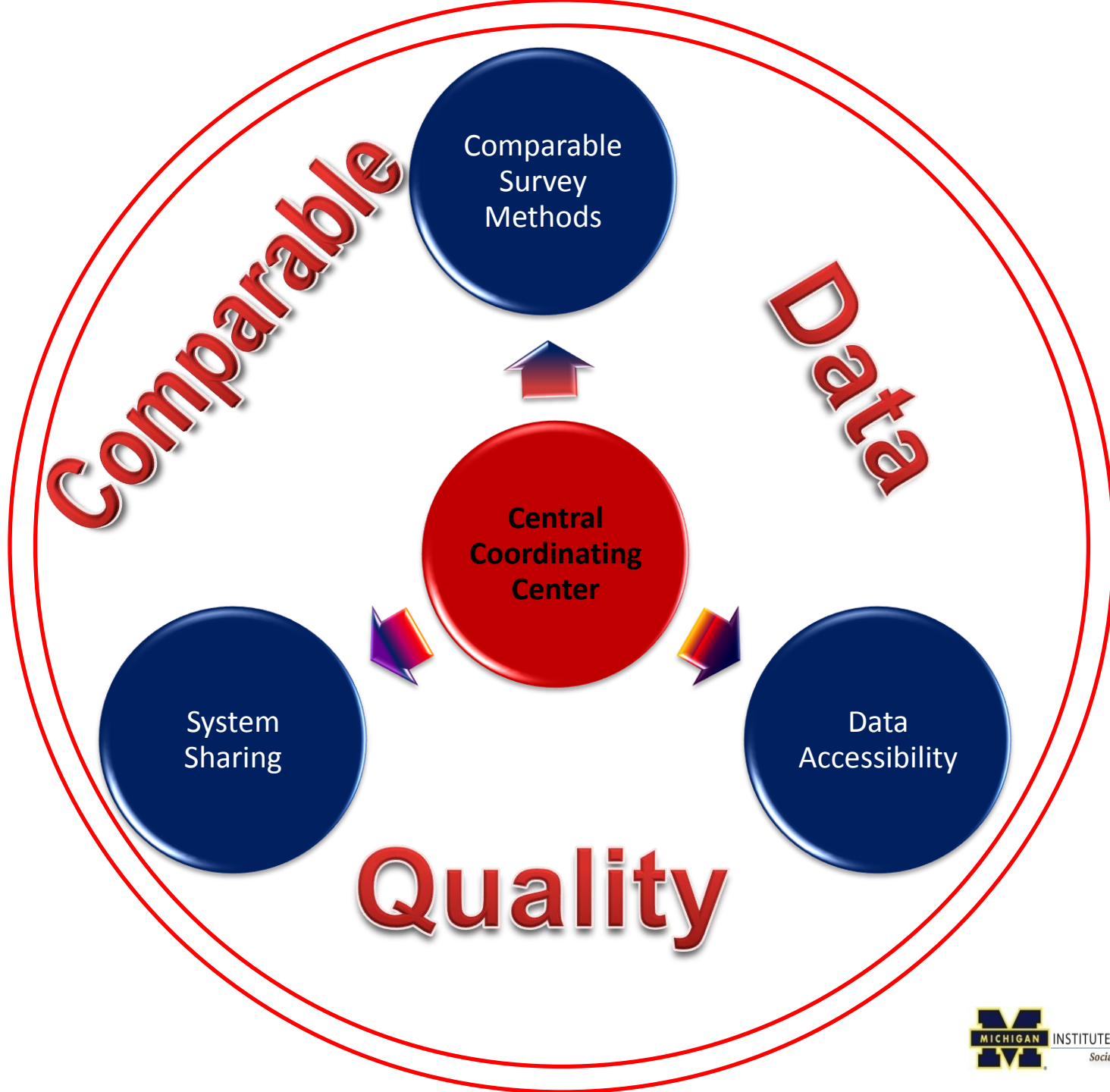


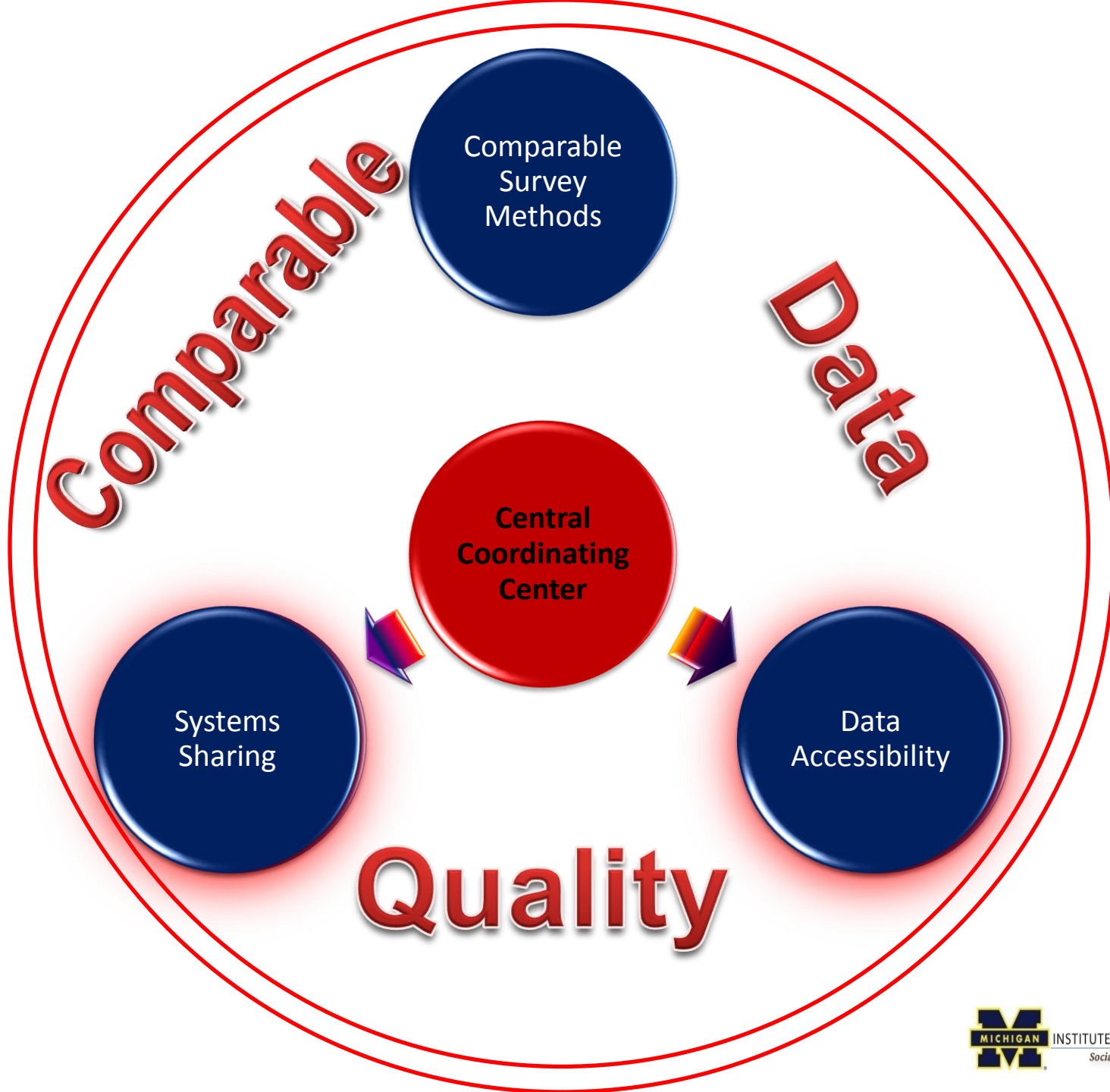
Outline

1. Cross-Cultural Survey Structure
2. Centralized Data Hosting Model
3. Saudi National Health and Stress Survey Design
4. Building Blocks of Centralized Data Hosting Model
5. Challenges Encountered during implementation of first four building blocks

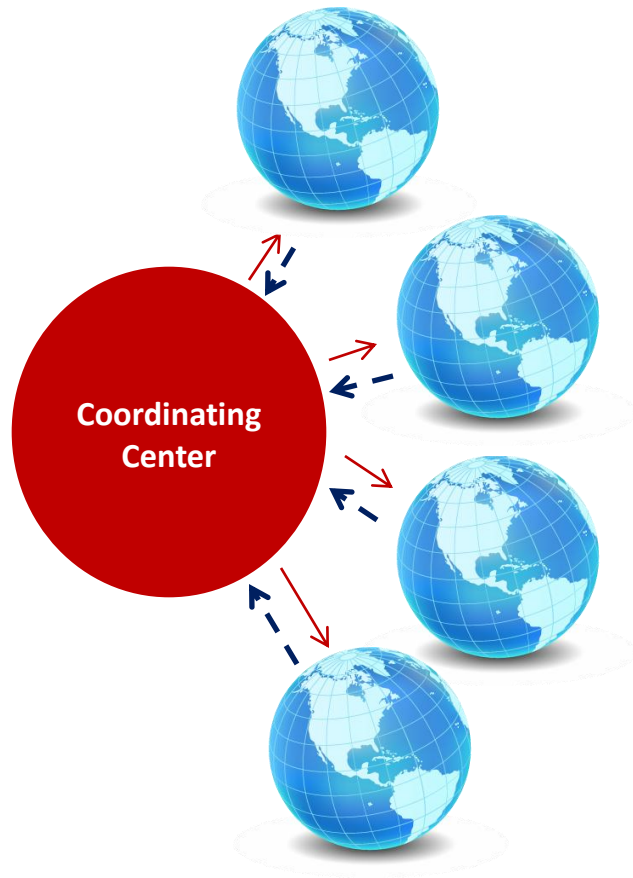
Cross-Cultural Survey Structures

- Cross-cultural surveys are organized in many different ways with varying levels of:
 - Comparable survey methods (same objective varying methods to same objective and similar methods)
 - Central coordination (no central coordination to central coordination with executive control)
 - Systems sharing (no system sharing to same systems used across surveys)
 - Data accessibility (each country owns its data to accessibility is open to international collaborators)
- Each has its advantages and disadvantages
- Determining factors including:
 - Funding availability
 - Source of funding
 - Local infrastructure
 - Local human resources and capabilities
 - Local regulations and politics
 - Language sharing





Centralized Data Hosting



- Real-time Support
- Real-time Monitoring
- Standardized Paradata
- Continuous training of cultural site staff
- Data Access

Saudi National Mental Health Survey (SNMHS)



Saudi National Mental Health Survey (SNMHS)

Main Objective:

To estimate the psychiatric morbidity in different regions, in Saudi Arabia

Study Aims:

1. To estimate the population prevalence of mental health conditions in Saudi Arabia
2. To model the etiology of individual mental health conditions
3. To study comorbidity with other psychiatric and health disorders
4. To estimate the magnitude of disability caused by psychiatric morbidity

Sample Design

- **Target Population:** Saudi Nationals 15-65 years old who are non-institutionalized and who reside in 13 administrative regions of Kingdom of Saudi Arabia
- **Sample Design:**
 - Multistage Area Probability Proportionate to Size
 - Stratified by 13 administrative Areas
 - Based on 2010 Census
 - Sample Size:
 - 5000 households
 - Two respondents per household: Female and male



Model of Data Collection

- Face-to Face
- Computerized Administered Personal Interviews (CAPI) using Blaise
- Audio-Computerized Administered Self Interview (A-CASI) for sensitive questions:
 - Marital Dynamics, Suicidality, Alcohol and Substance Use, Religiosity, etc...

Interviewing Teams

- Each household is assigned a team: male interviewer (mainly a physician), female interviewer (mainly a nurse), driver
- Interviews are gender matched
- Interviewers are employees of the Ministry of Health, Primary Health Care Centers, which are available throughout the Kingdom
- 150 Interviewers will be active in the field

Quality Control

- **Pre-field:**

- Cognitive Interviews
- Pilot Test
- Instrument and System Testing
- Staff Training and Support

- **During-field**

- Sample management : Extensive details will be collected on each call attempt made by interviewers to each household including:
 - Time/Day of contact
 - Mode of contact
 - Letters delivered
 - Incentives given
 - Information requested by respondent or questions asked
 - Observations on housing unit and neighborhood

Quality Control

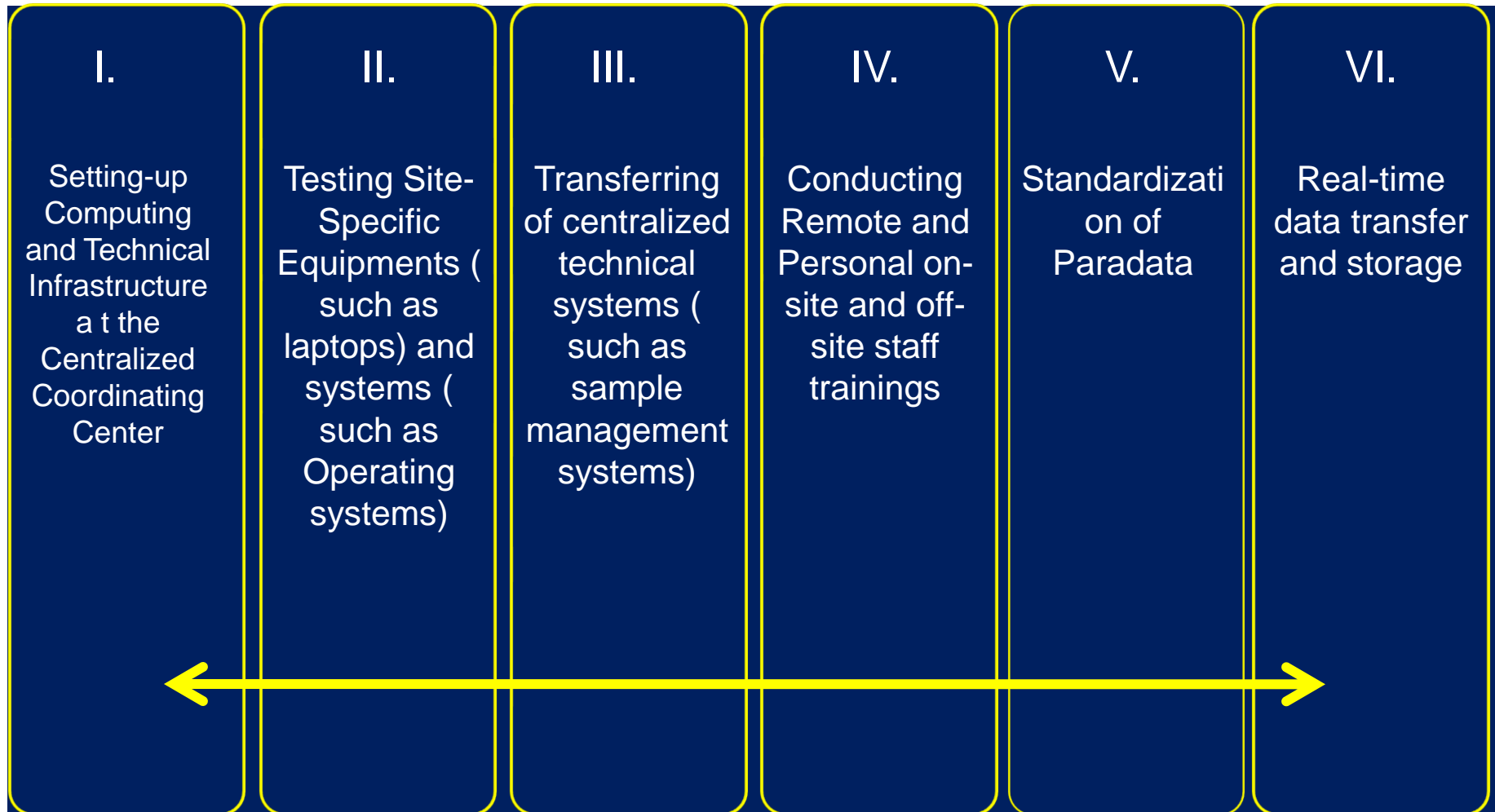
- **During-field (Continued)**

- Interviewer Evaluation:
 - Observation by supervisor
 - Re-contact sub-sample of respondents to verify information
 - Daily monitoring of interviewer productivity and performance (pre-designed reports, real-time analysis of survey data)
- Study Hot-line: a hot-line will be available for respondents to call and inquire about survey
- Data Transfer:
 - Multiple daily transfer through air cards connected to interviewers' laptop
 - Data will be hosted on a highly secured server assigned to this study at the Survey Research Operation, ISR, University of Michigan
 - Data will be backed up daily
- Data Cleaning: for missing data, discrepancies, invalid information, etc...

Additional Study Components

- DNA specimen through saliva sample collection
- Clinical re-appraisal
 - Most disorders assessed in CIDI
 - Psychosis
- Informant information on :
 - Disabled household members
 - Demented household members

Building Blocks of Centralized Data Hosting Model

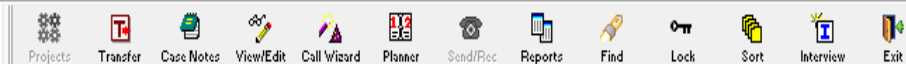


Building Blocks of Hosting Model

I. Technical Set-up	Details	Challenges
Server for data transfer, data storage and backup at Survey Research Operation-University of Michigan	Building a study specific server that runs on SRO routine data security, transfer, storage , reporting and backup rules	<ol style="list-style-type: none"> 1. Security Protocols 2. Mapping to Local drives 3. Language compatibility 4. Access control 5. Connectivity and port restrictions
II. Testing	Details	Challenges
Testing Local Saudi Equipments and Operating Systems and Connections	<p>Shipping local laptops from Saudi with local operating systems to test their compatibility with sample management system, Blaise, databases.</p> <p>Testing sending and receiving data from Saudi (SurveyTrak, Blaise)</p>	<ol style="list-style-type: none"> 1. Deciding on final laptop model 2. Deciding on operating systems (Arabic Window 7, English Window 7, English Window 7 with Arabic language pack) 3. Shipments of laptops (clearance and weekend differences)

Building Blocks of Hosting Model

III. Transferring systems and codes	Details	Challenges
Sample Management System	Sharing In-house system and adapting it for specific study features and Arabic Language	<ol style="list-style-type: none"> 1. Language Compatibility 2. Staff Language (Tester and Programmer) 3. Address System (census vs. common use) 4. Real-time line transfer and connectivity
Reporting System	Sharing in-house reporting system for field quality control and adapting it for specific study features	<ol style="list-style-type: none"> 1. Language Compatibility 2. Staff Language (Tester and Programmer) 3. Detailed programmed reports 4. Consolidation of logging and reporting systems for ease of use
Instrument Testing System (CTT)	Sharing in-house system and testing its ability to support Arabic Language	Work in Progress
Blaise programming codes	Sharing CAPI and ACASI codes for Programming Arabic Instruments	<ol style="list-style-type: none"> 1. Unicode Support for Questions 2. Unicode support for preloads 3. Keystroke files and Operating systems 4. Gender matched wave files



KSA Study Test 3

Sample Address Transfer Lines Transfer History Finalized

RC Ind	RCLS Follow-Up	Sample ID	Result Code	IW Status	Result Date	Tel Calls	FTF Calls	Last Call Mode	3 Calls No Contact	No Contact Letter Left	Letter Left	Sticky Note	Wizard Actions	Cont Obs Status	Iwer (Stat)
		1600000421-01	0000		00/00/0000	0	0								
		1600000421-02	0000	Suspend	00/00/0000	0	0								
		1600000422-01	0000		00/00/0000	0	0								
		1600000422-02	0000		00/00/0000	0	0								
*		1600000423-02	4301	Suspend	03/19/2011	0	1	FTF		No	No	No		Completed	
*		1600000424-01	4305	Suspend	03/19/2011	0	1	FTF		No	Yes	No		Completed	
*		1600000426-00	4303		03/19/2011	0	3	FTF		Yes	No	No		Completed	
		1600000427-00	0000		00/00/0000	0	0								
		1600000428-00	0000		00/00/0000	0	0								
		1600000429-00	0000		00/00/0000	0	0								
		1600000430-00	0000		00/00/0000	0	0								

Name of Occupant: إبراهيم حمد المانع

Family #: 1 Muhafatha: الرياض

Markaz: 0

Almusamma Alsakani: الرياض 100

Hail: الدريعية 50

Qitaa'a: 2

Block: 6

Mabna: 6 Maskan: 2

Street Name:

Building Name:

Case Notes: رفض مرة اخرى

Informant Name: فادي

Informant Age: 23

Informant Gender: Male

Type of building: قصر/فيلا

Floors: 2

Units: 2

Mushrif: 1

Mufatish: 10

Muraakib: 2

Aadad: 10

Resp Name: خالد

Resp Age: 30

Resp Gender: Male

Male R Relationship with Informant: Sibling

Phone Type:

Phone:

Ext:

Email:



Projects



Transfer



Case Notes



View/Edit



Call Wizard



Planner



Send/Rec



Reports



Find



Lock



Sort



Interview



Exit



View/Edit

Call Info

Respondent Address Update

Respondent Address (RO)

Contact 1 Address

Contact 2 Address

Sample ID: 1600000424-01

Title

First Name

Middle Name

Last Name

Respondent Name:

خالد

Name of Occupant:

إبراهيم حمد المانع

Family #:

1

Muhafatha:

الرياض

Markaz:

0

Almusamma Alsakani:

الرياض

Hail:

الدريهية

Qitaa'a:

2

Block:

6

Mabna:

6

Maskan:

2

Street Name:

Building Name:

Type of building:

قصر/ فيلا

of Floors:

2

of Units:

2

Mushrif:

1

Mufatish:

10

Muraakib:

2

Aaadad:

10

Phonetype:

Phone:

Ext:

Phonetype2:

Phone2:

Ext2:

E-mail:

Informant Name:

فادي

Informant Age:

23

Informant Gender:

Male

R Relationship to

Informant:

Sibling

Current Project : KSA Study Test 3

Select Project > Current Project > Search Results > Addresses

[← BACK](#)
[Sample](#)
[Addresses](#)
[Interviewers](#)
[Evaluations](#)
[Verifications](#)
[Criteria](#)
[New Search](#)

 Unsaved [Edit](#)

Displaying records 1 through 20 of 580

 1 2 3 4 5 6 7 8 9 10 ...29 [Next](#) »

[EXPORT](#)

B	A	C	H	L	N	P	R	Sample ID	Iwerid	Interviewer	Result	Title	R First Name	R Last Name	RU Occupant Name	Family #	RU Muhafatha
	A	C			N	P	R	1600000001-00	79432558	Smith, Jeff	5003				الوليد إبراهيم سلطان الدخيل	3	(الرياض 0)
	A	C			N	P	R	1600000001-02	79432558	Smith, Jeff	6014		Mary Jones		الوليد إبراهيم سلطان الدخيل	3	(الرياض 0)
	A	C			N	P	R	1600000002-00	79432558	Smith, Jeff	4003				حمد أحمد بن عبدالله الشيبان	8	(الرياض 0)
	A				N	P	R	1600000002-01	79432558	Smith, Jeff	0000				حمد أحمد بن عبدالله الشيبان	8	(الرياض 0)
	A				N	P	R	1600000002-02	79432558	Smith, Jeff	0000				حمد أحمد بن عبدالله الشيبان	8	(الرياض 0)
	A	C			N	P	R	1600000003-00	79432558	Smith, Jeff	1001				عبدالله عبدالهادي الفطيماني	5	(الرياض 0)
	A	C			N	P	R	1600000003-01	79432558	Smith, Jeff	3001				عبدالله عبدالهادي الفطيماني	5	(الرياض 0)
	A				N	P	R	1600000003-02	79432558	Smith, Jeff	0000				عبدالله عبدالهادي الفطيماني	5	(الرياض 0)
	A	C			N	P	R	1600000004-00	79432558	Smith, Jeff	3003				إبراهيم حمد المانع	1	(الرياض 0)



أرجو منك أن تفكر جيداً قبل الإجابة حيث أننا نريد أن تكون أجوبتك على الأسئلة التالية دقيقة إلى أكثر حد:

[الصفحة 36 في الكتيب] انظر إلى كتيب المصاحب صفحة 36، تتعلق الأسئلة التالية بالمشاكل الصحية التي ربما عانيت منها في * الثلاثين يوم الأخيرة *، خلال الثلاثين يوم الأخيرة، كم كانت عادة تحصل لك الأعراض التالية:

آلام في البطن؟

[تفراً إذا لزم الأمر: كل الوقت، معظم الوقت، بعض الوقت، قليل من الوقت، لا يوجد]

1, كل ☐

2, معظم ☐

3, بعض ☐

4, قليل ☐

5, يوجد لا ☐

NSD1a	<input type="checkbox"/>	NSD4a	<input type="checkbox"/>
NSD1b	<input type="checkbox"/>	NSD4b	<input type="checkbox"/>
NSD1c	<input type="checkbox"/>	NSD4c	<input type="checkbox"/>
NSD1d	<input type="checkbox"/>	NSD4e	<input type="checkbox"/>
NSD1e	<input type="checkbox"/>	NSD4e_1	<input type="checkbox"/>
NSD1f	<input type="checkbox"/>	NSD4f	<input type="checkbox"/>
NSD1g	<input type="checkbox"/>	NSD4g	<input type="checkbox"/>
NSD3		NSD5_1	

Building Blocks of Hosting Model

IV. Staff Training	Staff	Details	Trainers; Date
CIDI	Saudi Study Manager & Study Coordinator	CIDI Train-the-Trainer session in Lebanon	Regional CIDI Certified Trainers; October 2009
Cognitive Interviewing	Saudi Study Manger , Study Coordinator , & Interviewers	Protocol for conducting cognitive interviews ,& analyzing & reporting its data	Web-Training by SRO Survey Director; April 2010
Survey Methods Techniques	Saudi Study Manager and Study Coordinator	Summer Institute for Survey Research Techniques at University of Michigan	ISR Faculty, June-July 2010
Blaise Programming	Saudi Programmers	Blaise Language for Programming Arabic CAPI and A-CASI Instrument at Harvard University and University of Michigan	Harvard and SRO Programmers; July-August 2010
Sample Management Programming	Saudi Programmers	Power Builder Programming for Adapting SurveyTrak to Saudi Survey at University of Michigan	SRO Programmers; August 2010

Building Blocks of Hosting Model

Activity	Staff	Details	Trainers; Date
Help-Desk and Data Management	Saudi Programmers, Help desk and data manager	Protocols for preparing interviewers' laptops, maintaining them and trouble shooting software and hardware problems during field. Managing sample and assigning lines to interviewers, data transfer and storage, generating quality control reports, and data trouble shooting before, during and after field	SRO Technical Support Staff; Web-Training since October 2010 Hands-on-Practice during Pilot test at University of Michigan- April 2011
CIDI	Saudi Field Supervisors	Protocols for General Interviewing Training Techniques; Refusal aversion and persuasion, sample management, quality control, CIDI study specific guidelines at KSA	SRO Survey Director and CIDI Certified Trainer ; April 2011
Data Analysis	Saudi Analyst	Using SAS and SUDAAN for Analyzing CIDI data	Harvard Analysts; Spring 2011

Building Blocks of Hosting Model

- Staff Training Challenges
 - Time Differences
 - Weekday differences
 - Number of systems and programs
 - Hands-on vs. Lecture type
 - Attrition
 - Number of teams and institutions involved

Collaborators

Saudi Collaborators



Ministry of Health



Ministry of
Economy &
Planning



Prince Salman
Center for
Disability Research



King Saud
University



King Abdulaziz City
for Science &
Technology



King Faisal
Specialist Hospital
& Research Center

International Collaborators



World Health
Organization



Harvard
University



University of
Michigan