

Appendix I

Survey instrument items

HIT INNOVATIVENESS - FUNCTIONAL VECTOR

Please check (✓) the answer that best indicates the current status of each of the following computerized processes or systems in your healthcare organization. If you check the last column, **“Implemented”**, please circle the level that refers to the extent to which the system is currently used on a [1-7] scale in your hospital (**1=barely used; 7=extensively used**).

	No plan for implementation	Planning to implement	Began installation	Implemented
1. Accounting/Financial information system (e.g., budgeting, general ledger, fixed asset)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
2. Disease costing system (e.g., DRGs, CMGs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
3. Material management system (e.g., requisitions, billing, inventory management)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
4. Human resources management system (e.g., payroll, personnel files)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
5. Staff scheduling system (e.g., nurses)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
6. Financial/Clinical dashboards (e.g., executive information system, benchmarking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
7. Business intelligence applications (e.g., OLAP cubes, data mining tools)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
8. E-commerce for material purchasing / Business-to-Business applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
9. ADT system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
10. Master Patient Index (MPI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
11. Patient chart tracking system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
12. Laboratory information system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
13. Pharmacy information system (e.g., stock management, interaction checking, drug profile alerts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
14. Radiology information system (e.g., patient scheduling, staff workload management, results capturing)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
15. PACS (e.g., X-ray)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7

16. Ambulatory care scheduling system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
17. ER – Emergency room system (e.g., patient workflow management)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
18. OR – Operating room management system (e.g., materials management, patient workflow, operative reports)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
19. Critical care systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
20. Clinical & support staff workload management system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
21. Nursing documentation system (e.g., patient condition assessment, vitals and measurements recording, nursing interventions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
22. Clinical documentation system (e.g., patient care plans/pathways, physicians' interventions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
23. Continuing Quality Improvement (CQI) / Risk management (RM) system (e.g., incident reporting, adverse drug events)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
24. Electronic discharge summary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
25. On-line access to knowledge base (e.g., Medline)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
26. Electronic dictation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
27. Order entry / results reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
28. Computerized Physician Order Entry (CPOE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
29. Clinical decision support systems (e.g., preventive care alerts, reminders, diagnosis support, disease management)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
30. E-learning applications for healthcare providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
31. Telemedicine for E-consultation or E-diagnosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7

HIT INNOVATIVENESS - TECHNOLOGICAL VECTOR

Please check (✓) the answer that best indicates the current status of each of the following technologies or equipments in your hospital. If you check the last column, **“Implemented”**, please circle the level that refers to the extent to which the system is currently used on a [1-7] scale in your hospital (**1=barely used; 7=extensively used**).

	No plan for implementation	Planning to implement	Began installation	Implemented
1. Medical record scanning technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
2. SSO - Single sign-on technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
3. Biometry (e.g., fingerprints)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
4. Bar coding for medications management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
5. Bar coding for supplies / materials management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
6. Bar coding for patient identification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
7. Administrative data warehouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
8. Clinical data warehouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
9. Bedside terminals or PCs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
10. Portable computing / wireless devices (e.g., PDAs, pen tablet computers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
11. Voice recognition / speech recognition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
12. Robots for medication preparation and dispensing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7
13. RFID technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 2 3 4 5 6 7

HIT INNOVATIVENESS - INTEGRATION VECTOR

1. Has your healthcare organization implemented an Enterprise Resource Planning (ERP) system such as SAP or Oracle? *Check only one.*

- No plan for implementation (go to question 2)
- Planning to implement (go to question 2)
- Began deployment
- Implementation completed

If you answered “Began deployment” or “Implementation completed”, then check the modules your healthcare organization has deployed or implemented. *Check all that apply.*

- Accounting
- Finance
- Material management / Logistics
- Human Resources
- Other (specify):

2. Has your healthcare organization implemented an Electronic Medical Record (EMR)? *Check only one.*

- No plan for implementation (go to question 3)
- Planning to implement (go to question 3)
- Began deployment
- Implementation completed

If you answered “Began deployment” or “Implementation completed”, then check the following systems that are fully integrated with the EMR. *Check all that apply.*

- Laboratory system
- Radiology system
- PACS
- Critical care systems
- Other (specify)
- Pharmacy system
- Nursing documentation/charting system
- Physician documentation/charting system

3. Please indicate the extent to which your healthcare organization shares electronic medical records and/or clinical information with other entities. *Circle the number that best reflects the reality of your healthcare organization for each category.*

	Not at all							Very much
	1	2	3	4	5	6	7	
With other acute care organizations	1	2	3	4	5	6	7	
With long term care organizations	1	2	3	4	5	6	7	
With primary care organizations	1	2	3	4	5	6	7	
With medical clinics	1	2	3	4	5	6	7	

ORGANIZATIONAL CHARACTERISTICS

Please answer the following questions about the profile of your healthcare organization.

1. The approximate total number of beds in your healthcare organization is: _____
2. The approximate annual budget of your healthcare organization is: _____ \$
3. The approximate total number of physicians in your healthcare organization is: _____
4. The approximate total number of registered nurses in your healthcare organization is :

5. Is your healthcare organization a member of an integrated health network? Yes No
6. Your healthcare organization can be defined as: Regional / Rural Urban
7. Is your healthcare organization a university teaching institution (or affiliated)? Yes No
8. Does your hospital have an emergency room (ER)? Yes No
9. Does your hospital have one or more operating room(s) (OR)? Yes No
10. Does your hospital have an Intensive Care Unit (ICU)? Yes No
11. The approximate total number of permanent IT staff in your healthcare organization is:

12. The annual operating budget that is currently devoted to IT in your organization is:
_____ \$
13. Is there a formal IT steering committee in your organization that assists in setting or prioritizing IT directions and matching these with organizational goals? Yes No