MIS 3534 Fall 2016 – Strategic Management of Information Technology
Week 3 – IT and Competitive Strategies (II)
We will discuss ...

● Why merger and acquisitions (M&A)
● Why M&A in the healthcare industry
● How Trinity’s M&A strategy drives its IT management

Strategy 101 (1/2)

- **Competitive strategy**: how a business firm competes in a particular business or industry (Institute for Strategy and Competitiveness, HBS)
  - how a company can gain a *competitive advantage* through a *distinctive* way of competing

- Examples?
  - introducing new products
  - lowering prices
  - entering new markets
  - providing superior services
  - M&A, diversification, vertical integration

http://www.blackjack.org/strategy/
**Strategy 101 (2/2)**

- **Competitive advantage:** strategic advantage a firm has over its rivals within its competitive industry
  - A product or service that customers place greater value than on similar offerings from competitors
  - Some competitive advantages do not last long (i.e. temporal competitive advantages),
  - since competitors keep copying, imitating, or replicating.
- **Sustainable** competitive advantages is a basis for *long-term* profitability for the firm
  - achieving financial performance that *consistently* outperforms industry peers
Steps in Strategy Formulation

- **Where to play:** look out industries or markets and figure out which one is profitable
  - The five forces model for competitive analysis

- **How to play:** choose specific business strategies
  - The three types of generic strategies

- **Play with what:** know what is needed to succeed in the competitive industry (tools, skills, muscles, ...)
  - Core competencies
Generic Strategies

Cost Strategy

Low Cost (Price)       High Cost (Price)

Broad Market
- Cost Leadership
- Differentiation

Narrow Market
- Focused Strategy
- Low-Cost Focus
- High-Cost Focus

http://crux-xlri.com/porter%E2%80%99s-generic-strategies/
Cost Strategy

Low Cost

Broad Market

SOUTHWEST AIRLINES

High Cost

Differentiation

Narrow Market

allegiant

Virgin

america

http://crux-xlri.com/porter%E2%80%99s-generic-strategies/
Why merger and acquisitions (M&A)?

- Why does a company acquire and merge another?
- Find out with your classmates!

Why M&A?

- To enter a new market for growth
- To reduce costs (economies of scale, synergies)
- To diversify (economies of scope)
- To acquire new assets (e.g. factories, brands)
- To achieve vertical integration
- To kill competition
- To get bigger!

CONSOLIDATION STRENGTHENED THE U.S. AIRLINE INDUSTRY

American Airlines

TWA

America West Airlines

U.S. Airways

Delta

NWA

Northwest Airlines

United

Continental Airlines

Southwest

AirTran

www.usfunds.com
Average return fare worldwide and US airlines yields (seasonally adjusted)

US airlines yield (left scale)

Average return fare worldwide (right scale)

Load Factor (Seasonally Adjusted)

http://www.travelindustrywire.com/article87388.html
Why M&A in Trinity Health?

Hospitals & Facilities

http://www.trinity-health.org/hospitals-facilities
M&A in Penn Medicine

Penn Presbyterian Medical Center
(acquired in 1995)

Penn Rittenhouse
(a.k.a Graduate Hospital)
(acquired in 2007)

Pennsylvania Hospital
(Oldest Hospital in US)
(acquired in 1997)
Why M&A in Trinity Health?

● To enter a new market for growth
● To reduce costs (economies of scale, synergies)
● To diversify (economies of scope)
● To acquire new assets (e.g. factories, brands)
● To achieve vertical integration
● To kill competition
● To get bigger!
Economies of Scale

- What are the fixed costs in hospital?
- What are the variable costs?
Economies of Scale

<table>
<thead>
<tr>
<th>Hospital A</th>
<th>Hospital B</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Product</td>
<td># of Product</td>
</tr>
<tr>
<td>Variable Cost</td>
<td>Variable Cost</td>
</tr>
<tr>
<td>Fixed Cost</td>
<td>Fixed Cost</td>
</tr>
<tr>
<td>Total Costs</td>
<td>Total Costs</td>
</tr>
</tbody>
</table>
## Economies of Scale in M&A (1/2)

### Hospital A+B

<table>
<thead>
<tr>
<th># of Product</th>
<th>Before M&amp;A</th>
<th>After M&amp;A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing economies of scale](graph.png)
Economies of Scale in M&A (1/2)

- Fixed Costs in hospitals
  - Capitals – building, medical equipment, license
  - Supporting functions – HR, finance/accounting, IT, procurement
- By M&A, the hospitals can save the fixed costs by consolidating capitals and supporting functions, reducing the average costs.
How Pays Hospitals? (They are not customers!)

Florida Hospital's Payer Mix by Patient Volume (2012)

- Private Payers
  - Private Insurance: 37%
  - Other: 3%
- Public Payers
  - Medicare: 24%
  - Medicaid: 24%
  - Self-Pay: 12%

Have you tried to understand your bill?

**Explanation of benefits**

for a claim received for ALEX W GOLDSTEIN

Summary of a claim for services on March 7, 2011

<table>
<thead>
<tr>
<th>Amount Billed</th>
<th>$400.00</th>
<th>This was the amount that was billed for your visit on 03/07/2011.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discount</td>
<td>$151.39</td>
<td><strong>You saved $151.39.</strong> CIGNA negotiates discounts with health care professionals and facilities to help you save money.</td>
</tr>
<tr>
<td>What CIGNA plan paid</td>
<td>$208.61</td>
<td>CIGNA will pay $208.61 to ROBERT M LERCH MD on 03/24/2011.</td>
</tr>
<tr>
<td>What I owe</td>
<td>$40.00</td>
<td>This is the amount you owe after your discount, what your CIGNA plan paid, and what your accounts paid. People usually owe because they may have a deductible, have to pay a percentage of the covered amount, or for care not covered by their plan. Any amount you paid since care was received may reduce the amount you owe</td>
</tr>
<tr>
<td>You saved</td>
<td><strong>90%</strong></td>
<td><strong>You saved $360.00 (or 90%) off the total amount billed. This is a total of your discount and what your CIGNA plan paid.</strong></td>
</tr>
</tbody>
</table>

Why is “Getting Bigger” important?
Fee-for-Service vs.

<table>
<thead>
<tr>
<th>Service</th>
<th>Points</th>
<th>Service Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Orders Routine Medications</td>
<td>0.25</td>
<td>$10.00</td>
</tr>
<tr>
<td>Staff Dispenses Medication</td>
<td>6.00</td>
<td>$240.00</td>
</tr>
<tr>
<td>Coordination of Communication between Physician and other Health</td>
<td>0.25</td>
<td>$10.00</td>
</tr>
<tr>
<td>Professionals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician Orders</td>
<td>0.25</td>
<td>$10.00</td>
</tr>
<tr>
<td>Assignment of medications</td>
<td>0.75</td>
<td>$30.00</td>
</tr>
<tr>
<td>Bathing Assistance: Stand by</td>
<td>3.50</td>
<td>$140.00</td>
</tr>
<tr>
<td>Dressing: Choose and lay out clothing</td>
<td>1.25</td>
<td>$50.00</td>
</tr>
<tr>
<td>Grooming: Assist with make up</td>
<td>0.75</td>
<td>$30.00</td>
</tr>
<tr>
<td>Mobility assist via wheelchair to/from dining room</td>
<td>6.75</td>
<td>$270.00</td>
</tr>
<tr>
<td>Reminders for upcoming activities</td>
<td>0.25</td>
<td>$10.00</td>
</tr>
<tr>
<td>Social: 1 on 1</td>
<td>3.50</td>
<td>$140.00</td>
</tr>
<tr>
<td>Bed making</td>
<td>0.75</td>
<td>$30.00</td>
</tr>
<tr>
<td>Transportation: requires assistance arranging non-scheduled transportation</td>
<td>0.50</td>
<td>$20.00</td>
</tr>
<tr>
<td>Pet Care - Feed</td>
<td>2.00</td>
<td>$80.00</td>
</tr>
<tr>
<td>Financial management services: assist with paying bills, phone calls to providers, etc</td>
<td>1.00</td>
<td>$40.00</td>
</tr>
</tbody>
</table>

Fee-for-Value

$15,000

https://www.openplacement.com/community/blog/top-8-things-to-consider-when-discharging-to-senior-care/
http://www.ltlmagazine.com/article/fee-service-increases-resident-satisfaction-profit
Special Commission on the Health Care Payment System’s Recommendation

CURRENT FEE-FOR-SERVICE PAYMENT SYSTEM

THE PROBLEM
Care is fragmented instead of coordinated. Each provider is paid for doing work in isolation, and no one is responsible for coordinating care. Quality can suffer, costs rise and there is little accountability for either.

\[ \text{Hospital} \quad \text{Specialist} \quad \text{Primary Care} \quad \text{Home Health} \]

PATIENT-CENTERED GLOBAL PAYMENT SYSTEM

THE SOLUTION
Global payments made to a group of providers for all care. Providers are not rewarded for delivering more care, but for delivering the right care to meet patient’s needs.

\[ \text{Primary Care} \quad \text{Hospital} \quad \text{Specialist} \quad \text{Home Health} \]

Governments, payers and providers will share responsibility for providing infrastructure, legal and technical support to providers in making this transformation.

http://yes.goinvo.com/articles/health-reform-2-0-envisioning-a-patient-centered-system
Why M&A in Trinity Health?

● To get bigger
  ▪ to decrease the bargaining power of buyers (vis-à-vis insurance companies)
  ▪ so that the insurance companies pay more for its services

● To reduce costs (economies of scale, synergies)

● To diversify (economies of scope)
  ▪ Under the fee-for-service model, hospitals do not have much incentive to reduce costs.
  ▪ The transition from fee-for-service to fee-for-value requires to reduce costs and improve the quality of care.
IT Management at Trinity

● What is a Unified Service Organizations (USO) (p. 3)?
   ▪ It aims to reduce the fixed-costs in supporting functions (e.g. HR, finance, supply chains, and IT).

● Why does Trinity implement a “Common Digital Platform”?

● Why is IT important in hospitals?
   ▪ IT in hospitals is mission-critical. Well-functioning IT is essential for quality care for patients.
Electronic Medical Records

http://www.macris.com/mp/md/emr/
## Electronic Prescribing Software

![Electronic Prescribing Software Interface](http://www.doctorsaccess.com/electronic-prescribing.html)

### Practice Information
- **Practice:** Doctors Access Corp Practice
- **User:** Doctors Access Doctor

### Patient Demographic Information
- **Patient:** DAVID R MARLER (#7182)
- **Phone:** (615) 400-6842 (home)
- **Pharmacy:** CVS/Pharmacy #7626 - 4709 NOLENSVILLE RD, NASHVILLE, TN

### Prescription Information
- **DOB:** 05/17/1951
- **Gender:** Male
- **LOV:** No last office visit [Visit Today]
- **Formulary:** Not entered [Add]

### Your practice group has 3 renewal requests waiting.

### Prescribe a Medication
- **Select Medication for Prescription**
  - **Name:**
  - **Favorites:** -Choose a Favorite-
  - Find
  - Category Search

### Medications

<table>
<thead>
<tr>
<th>Medication</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inderal LA (propranolol) Capsule, Sustained Action 24 hr 60 mg</td>
<td>Renew Selected [Select All] [Select None] [Check Interactions for Selected]</td>
</tr>
<tr>
<td>Levatol (penbutolol) Tablet 20 mg</td>
<td>Renew</td>
</tr>
</tbody>
</table>

### Allergies/Adverse Reactions
- Problems: None.

### Pending Prescriptions for this Patient
- None.

*Note: In the case of a pharmacy-related fax machine failure, we will contact your practice and inform you that it is necessary to call in the prescription to the pharmacy directly. If your office is closed or it is after business hours, we will notify your answering service.*

Common Digital Platform (1/2)

- “Genesis also provided a common software package across the enterprise for each of five key functions” (p. 4)
  - electronic health records
  - computerized physician order entry
  - adverse drug event alert
  - revenue management
  - supply chain management

- Why is this necessary?
# Before the Genesis Strategy

<table>
<thead>
<tr>
<th>Operating Units</th>
<th>Silver Spring, MD</th>
<th>Columbus, OH</th>
<th>Port Huron, MI</th>
<th>Germens, MI</th>
<th>Pontiac, MI</th>
<th>Livonia, MI</th>
<th>Ann Arbor, MI</th>
<th>Battle Creek, MI</th>
<th>Grand Rapids, MI</th>
<th>Muskegon, MI</th>
<th>South Bend, IN</th>
<th>Clinton, IA</th>
<th>Dubuque, IA</th>
<th>Nason City, IA</th>
<th>Sioux City, IA</th>
<th>Boise, ID</th>
<th>Fresno, CA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Administration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration</td>
<td>HBSC STAR</td>
<td>SMS Med Series</td>
<td>HBSC Plus 2000</td>
<td>HBSC HealthQuest</td>
<td>HBSC STAR</td>
<td>SMS Med Series</td>
<td>HBSC STAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Records</td>
<td>3M</td>
<td>3M</td>
<td>Quadrade</td>
<td>HSS</td>
<td>3M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRO Grouper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APG/AGP Grouper</td>
<td>HSS</td>
<td>HSS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enterprise Resource Planning (ERP)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Ledger</td>
<td>PeopleSoft</td>
<td>PeopleSoft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payroll/Human Resources</td>
<td>SMS Med Series</td>
<td>GEAC</td>
<td>GEAC</td>
<td>PeopleSoft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A/P</td>
<td>HBSC</td>
<td></td>
<td>Global</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials Management</td>
<td>Self Developed (Analysis &amp; DSS)</td>
<td>TSI Mainframe</td>
<td>TSI Mainframe</td>
<td>TSI AS400</td>
<td>Self Developed (Analysis &amp; DSS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost Accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Systems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician Order Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Results Reporting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Documentation</td>
<td>Ellipsys</td>
<td>HBSC Care Manager</td>
<td>TDS</td>
<td>HBSC Care Manager</td>
<td>TDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td>HBSC STAR</td>
<td>Center Pathnet</td>
<td>Sunquest</td>
<td>Classic</td>
<td>Center Pathnet</td>
<td>Sunquest</td>
<td>Center Pathnet</td>
<td>Sunquest</td>
<td>Center Pathnet</td>
<td>Sunquest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy Hospital</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td>Center Pathnet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgery Management</td>
<td>RED-Q Healthcare</td>
<td>PC SE</td>
<td>Omni-server</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Scheduling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology</td>
<td>HBSC STAR</td>
<td>IDX</td>
<td>ADAC MARIS II</td>
<td>HBSC Series</td>
<td>ADAC MARIS II</td>
<td>HBSC Series</td>
<td>ADAC MARIS II</td>
<td>HBSC STAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transcription</td>
<td>Softmed</td>
<td>Dolby</td>
<td>Softmed</td>
<td>Dolby</td>
<td>Softmed</td>
<td>Medite</td>
<td>Softmed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After the Genesis Strategy

What is the improvement in Trinity?
Common Digital Platform

- What if a patient at Hospital A needs to get a lab test at Hospital B and meet a specialist at Hospital C?
Common Digital Platform

- What would happen if each hospital uses a different kind of EMR?
Common Digital Platform (2/2)

- The Common Digital Platform reduces the costs
  - not only in managing day-to-day IT operations
  - but also in integrating the IT of acquired hospitals.
- It enables effective communication and coordination among hospitals and other care providers (e.g. specialists, primary care, labs).
  - reducing errors and wastes of time
  - improving the quality of care
Trinity’s M&A Strategy and Digital Platform

• Without the Common Digital Platform, Trinity could not have achieved the objectives of M&A.
  ▪ to reduce costs in IT management (economies of scale)
  ▪ to reduce costs in patient care
  ▪ to improve the quality of care

• In addition, without the platform, the organization could have become so big and complex
  ▪ that its cost could *increase* compared to before M&A.