Creating IT-enabled Business Options

MIS Research Center
Carlson School of Management
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Agenda

- Why justify IT investment?
- What are business options?
- Process of creating business options
- Where are the 'options' opportunities?
- Business Options cases from
  - Trinity Health
  - GE Aircraft Engines
  - UPS – video clip
- BREAK
- How to prepare for creating business options?
- Weaknesses and Opportunities
- Issues in creating business options
- Traits of option exploiting organizations
Why does an organization want technology justification?

- What are the CFO’s real concerns?
- What are the CIO’s fears?
- What is the objective of an IT investment justification?

IT Justification is important…
…but not executed well

- 86% of IS professionals believe that IT value is a priority, but under 15% conducted post-implementation measurement*

- Commonly used retrospective approaches
  - Cost-Benefit analysis
  - Net Present Value (NPV)
  - Return on Assets (ROA)
  - Total Cost of Ownership (TCO)

*Source: Giga Group survey
Most financial justification approaches consider tangible investments only

- How do we account for investments that create assets that provide agility to businesses?
  - First mover
  - Killer Apps
  - Process superiority
  - Flexibility to launch products quickly
  - Improved image from greater reliability
  - Tighter integration with partners
  - Compatibility with other products

What are IT-enabled business options?

- IT-enabled business options are choices afforded, but not necessarily anticipated, from IT investment to exploit business opportunities to derive competitive advantage
Flexibility or Agility as a Business Option

Option + 2nd Investment = Asset

Airlines:
Option + Aircraft = Revenue

Server Capacity + Business Application (e.g., Online Banking, Land’s End Virtual Model) = Revenue or Business Benefit

Information Technology

Creating Business Options
A process

Adapted from Sambamurthy et al. (2003)
Where are the opportunities for IT-enabled business options?

<table>
<thead>
<tr>
<th>Cost Mgt</th>
<th>Design</th>
<th>Production</th>
<th>Logistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully allocated costs; ABC</td>
<td>Integrate Mfg. and Design</td>
<td>Computer Aided Mfg.</td>
<td>Link Dispatch, Warehouse, QC</td>
</tr>
<tr>
<td>Cost Information Systems</td>
<td>Knowledge Based Systems</td>
<td>Robotics linked with design and admin. systems</td>
<td>Real time samples, tests, modification</td>
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</tbody>
</table>
Cost Mgt can lead to Competitive Advantage*
Options creation at AirTran and JetBlue

- Managing Costs lead to lower cost per seat/mile
  - US Airways 11.8c
  - AirTran 8.4c
  - JetBlue 5.9c

- Leads to Available Cash
- Cash gives opportunities to invest in business options
  - Purchase profitable routes
  - Sweet deal on canceled Boeing plane orders
  - Hire experienced laid off workers

* With apologies to Michael Porter

Source: How Discount Airline Profited from the Bigger Rivals Woes
Wall Street Journal August 12, 2004

Options Payoff for AirTran, JetBlue
“… keep on giving”

- New planes
  - Lower fuel costs and maintenance costs
  - Happier customers

- Additional Routes
  - Higher occupancy rate
  - Connections to more cities

- Hiring laid off workers
  - Lower pay scales
  - Younger employees have lower medical bills

- More cash
  - Lower capital borrowing costs
  - Lock-in lower fuel prices with hedges

Source: How Discount Airline Profited from the Bigger Rivals Woes
Wall Street Journal August 12, 2004
Industry Examples of IT Enabled Business Options

- GE Aircraft Engines
- Trinity Health’s Adverse Drug Event (ADE) System
- UPS Worldport Operations - Video clip

BREAK

Business Options at UPS

IT Strategy
- Interface systems with Customers
- Manage packages
- Design and develop new services
- Manage Customer Relationships

IT Investment

IT Assets
- E-procurement
- Package flow optimization
- Routing Hub
- Hub simulation system
- Campus Ship Web based system

IT Competencies
- Pricing of services
- Shorter routes
- Fix incorrect addresses
- Resource planning
- Customer supply chain visibility

Business Options
- Outsource unprofitable routes
- Reduce delivery time by 1 day
- Intercept, reroute packages
- Labor, equipment flexibility
- Target new services to customers

Entrepreneurial alertness of competitive forces

Competitive Advantage
- Cost focus
- Leader in understanding logistics processes
- Reputation for high quality reliable service
- Barriers to competitor entry

Second Investment in know-how, IT and warehouses

Firm-level capability
- Visibility of goods in transit
- Optimized processes
- Single source service provider
- Access to customer supply chain

A B C D E
Expected Outcomes from Business Options

- Caveat - IT-enabled business options are ‘price of entry’ which must be availed to create outcomes
- Outcomes include
  - New business opportunities – GE, UPS
  - Risk mitigation – Trinity Health
  - Improved customer service – UPS, Land’s End
  - Cost Control – Holy Cross Health System
- Cost control in competitive markets can be as valuable as other outcomes

Weaknesses of IT-enabled business options

- Risk
  - Business option might not pay off
  - Limit future options by being locked into an IT infrastructure
  - Short shelf life of the option – when competitors or vendors create better options
- Time consuming strategic thinking and planning
- Drain on people and systems resources
- Requires spending ‘political capital’ when the outcomes are unclear
Reducing risk from IT-enabled investment in business options

- Identify dual purpose IT investments that also accomplish
  - Cost reduction
  - Improved time to market
  - Greater accuracy or quality of products

- Partner with business leaders

- Fix ‘pain’ points of the organization
  - Lost contract bids
  - Aggressive competitor
  - Causes of litigation

How to Prepare for IT-enabled Business Options?

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- Provide something of value
- Bundle services with products
- Merge IS into CRM
- Build SCM partner alliances
- Start with one
- Join an e-Hub
- Forum for dialog
- KM sharing incentives
- Engage customers in design and test

- Strategy to exploit cost information
- Allocate profits to develop systems
- Communicate consequences

- Higher customer expectations
- Customers’ unwilling to pay
- Limited bargaining power
- Lack of integration
- Substantial IT investment
- Lack of communication between functions
- Limited job flexibility
- Unclear strategy
- No immediate ROI
- Resistance to cost cutting

- Integration of upstream systems
- Highly trained customer reps
- Centralized database
- Data standards
- Demonstrable contribution to partners
- Interface engine
- Deep understanding of business processes
- Cross functional teams
- Hybrid managers
- Cross trained employees
- Involved customers

Benchmarking data
Managers’ deep knowledge
Plans to address scenarios under various situations

Customer Service
Logistics
Operations
Cost Mgt

Resources Needed
Resolutions
Impediments
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-Merge IS into CRM |

Issues in Business Options
Some partly baked ideas

Can Knowledge Management and Discovery initiatives be tied to Options?

Knowledge Bearing Component  
Knowledge Integration (IT’s role)  
Business Option Creation
KM and Business Options
Exxon Mobil’s oil exploration

Issues in Business Options
Virtual alliance organizations

- What options can be created among virtually connected partners?
- Who owns the business option?
- Who bears the risk of the IT investment?
- What role does the bargaining power of the partner play?
Option creation in e-hub environments
Example: Cisco-led e-Hub (now i-Hub)

Options creation in eHub environments
Who will benefit?
Traits of options exploiting organizations

- An ambidextrous organization?
  - Flexible yet stable business processes
  - Encourages taking risks while rewarding successes
  - Has visionaries as well as doers
  - Insulates risk-takers from nay-sayers
  - Thinks ‘integration’ of systems, data, customers

- Cold reality
  - Not all firms have the $ to take on risks
  - Few options will be successful
  - There will be false-starts
  - People will get ‘burnt out’
  - Serendipity will play a role