Strategic Thinking For IT - Part 1

• IACT 901
• Modules 3 and 4
• University of Wollongong

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Strategy Defined

• Purpose of strategy is to provide direction, concentration of effort (focus) constancy of purpose (perseverance) & flexibility (adaptability)
• At a pragmatic level strategy can be viewed simply as finding a short way (the shorter the better) of ‘brute force’ to accomplish its end

Therefore It MUST Focus on

– Building new advantages that increase customer satisfaction & create distance from competitors
– Compressing or eliminating the advantage of competitors

Five Generic Categories of Advantage

1. Cost advantage - being able to provide products/services more cheaply
2. Value-added advantage - advantage creates a product/service that
   - Offers some highly desirable feature/functionality
3. Focus advantage - advantage more tightly meets the explicit needs of a particular customer
4. Speed advantage - permits business to create/deliver products & customer service needs quicker than others
5. Manoeuvrability advantage - advantage permits business to adapt to changing requirements more quickly than others
   - One advantage competitors can’t take from you
• Business wins by being cheaper, more unique, more focussed, faster & more adaptable than competitors

Questions in Small Groups

• Q. What examples can you provide of where IT was/may be used to provide advantage under each of the 5 categories?

• Q. What strategies might a govt dept or service in a non-competitive environment employ? Would they fit into the categories above?

More Questions

• According to boar (1997) if an action does not lead to development of advantage it is of no strategic interest

• Q. Do you think this would always be the case? Give an example to support your position.

Still More Questions

• Administration of advantage is the building of a set of sustainable competitive advantages (SCA’s) for the business.

• Q. Do they always have to be sustainable? How likely is this with IT? Give examples of cases where IT does/does not provide long-term advantage.

SCA [Sustainable Competitive Advantage]

• An SCA is a resource, capability, asset or process that provides a business with a distinct attraction to its customers & a unique advantage over its competitors.

SCAs Have Seven Attributes

• SCA viable in terms of time & cost it would take a competitor to imitate it

• Degree of relative advantage - does the competition feel it is worth the effort?

• Compatibility - how harmonious is the advantage with the rest of the competitors product plan?
Simplicity - does the competitor have the skills necessary to imitate the advantage?

Trialability - can prototyping or other expediting techniques be used to quickly trial their version of the advantage?

Observability - how hard is it for the competition to understand the internals of the advantage?

Four Dimensions of Strategy

- Time - thinking across time from perspective of the past, present & future
- Substance - thinking about problems in terms of both concrete & abstract natures
- Cardinality - multiple issues concurrently
- Synthesis - analytical decomposition lies at the heart of strategic thinking

Strategic Thinking

- Strategists think about problems in terms of established & proven strategic ideas or themes

Strategic Paradox

- In our daily lives we use linear logic to solve problems
- Consists of using common sense, deductive/inductive reasoning & concern for economies of time, cost & overall effort required

Summary Questions

- What are the five generic categories of advantage?
- Describe SCA (sustainable competitive advantage).
- SCAs have seven attributes, what are they?
- What are the 4 dimensions you must consider when developing your plan?
Frameworks Are Used As Strategic Aids
- Methods developed & offered by academics, consultants & practitioners that capture some important strategic insights
- Packages strategic insights in a way that makes them useable by many

Dynamics of Change

Q. Can you think of an example of technological substitution?

- Substitute technology offers inducement to switch by virtue of improved value proposition
Technological Diffusion

- Process by which a marketplace learns about a substitute technology
- Provides an understanding of the logic & speed of switching by customers
- By nature information technologies that are capital, infrastructure & skill intensive require time to diffuse.

Stages

- At stage 1 the product will be incomplete & expensive & only appealing to a niche market
- In stage 2 & 3 dramatic improvements are made. For every dollar invested in improvement there is a significant greater return in value proposition
- In stage 4 the limits of the technology are reached. It is increasingly difficult to squeeze out improvements

Speed of Diffusion Is a Function Of:

- Value proposition - how superior is the value proposition of the new to the old?
- Infrastructure - how much infrastructure support must be put in place to support the new technology?
- Learning - what communication channels are used to reach, persuade, influence the market?
- Ease of substitution - how much effort (time, cost, training etc) is required to adopt the new technology?
- Defense - how does the old technology defend itself & in doing so alter the comparative value proposition?

Life Cycle of Technology

- Life cycle of a technology routinely illustrated through the use of S curves
- Logic of S curves
  - All technologies should/must be understood in terms of performance limits
- Price/performance of investments in technology will follow an S curve shape but flatten out as it eventually reaches its limit

Strategic Framework I

- Understanding S curves & interpreting events in terms of them is a crucial skill for all IT strategists
- S curve "when & if analysis" can be of great assistance in analysing the substitution of the internet for private networks ie. EC over the internet vs EDI using van's

Strategic Framework II-Scenarios

- Provide a structured way to define possible futures, understand causation chains leading to those futures & develop options & strategies to deal with the uncertainties
  - A causation chain is a time-ordered set of events that moves you from a start state, the world today, to a plausible end state
• Also provide a structured context to stretch thinking about what might happen & prepare for the eventuality
• For desired futures the strategist can develop action to make them happen
• For undesirable futures actions to block them from unfolding can be developed
• When multiple futures share a common pivotal event the business can be positioned on that event to prepare to spring in multiple directions

Benefits of Scenario Approach
– Forces an external focus motivates to take a fresh and open view
– Stimulates deep, creative & insightful thinking. Resources of a team to imagine the future
– Broadens understanding of what drives IT
– Challenges & provokes community learning. Forces everyone to think outside 'the box'

• Prepares the business to recognise futures as they emerge
• Scenarios & S curve theory compliment each other
• Highly advantageous to mix techniques in strategic thinking
• When thinking about futures in terms of scenarios it opens planning to a number of options

• Can hedge bets & prepare for multiple futures
• Emphasise making reversible decisions
• Stagger initiatives & commitments

• Can keep resources in reserve
• Choose actions that permit meeting multiple futures
• Maintain a state of hyper-vigilance & watch for a winning

• The ability to position the business in any or all of these ways is highly compatible to mediating the necessity to take deliberate actions while coping with heightened uncertainties & risks of the times
**Strategic Framework III- Core Competencies**

- Represents the collective learning of an organisation
- Emphasises especially hard to coordinate diverse skills that integrate multiple streams of technologies
- Provides the roots of competitive advantage
- Can be leveraged to develop & support multiple products for varied markets

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**Defining Attributes**

- Provide access to a wide variety of markets
- Make a significant contribution to customer's perceived benefits of the product
- Are difficult to imitate
- Are sustainable

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**Defining Attributes**

- Often represent the complex coordination of multiple heterogeneous technologies & applied skills
- Provide a highly leveraged environment by substituting competence for capital

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**Defining Attributes**

- Core-competency driven organisational units maintain a portfolio of competencies that enable them to create/evolve a portfolio of products for a collection of markets
- Obvious impact of core competencies on IT is that you need to reflect carefully on what competencies are to be & how they should be defined

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**Question**

- Q. For each scenario future what core competencies will we need to master?
Most interesting implication of core competencies is impact on staffing & competency definition.

Many IT professionals have historically associated identities strongly with specific technologies.

Incompatible with a fluid IT organisation.

Important to define competencies in terms of generic skills.

Of all things designed for flexibility & speed human resources are the most crucial.

Framework IV - Dominant Logic

It is a pervasive & universally accepted logic of how an industry works & how one competes in that industry

It does not usually have to be defended & actions contrary to the dominant logic are automatically held suspect

Also referred to as the conventional wisdom of the times

Provides structure to document historical, contemporary & projected dominant logic for an industry & associated logic of IT assets needed to support that logic

Reasoning of the Framework

How is it generally agreed that you win in this industry today & how do you deploy IT assets to make it happen?

How is it generally agreed that you won in this industry 5 years ago & how did you deploy IT assets to make it happen?

How will you win in this industry 5 years from now & how will IT assets have to be deployed to make it happen?

Technique integrates nicely with scenarios and S curves

IT strategy BOTH impacts business strategy & enables it

Problem for IT strategist is understanding how the business wants to win so that IT assets can be selected & deployed to both influence how they will win & enable winning to occur

Dominant logic provides simple but highly enlightened framework to conceptualise this information, achieve consensus on how IT can be used to win & develop shared agenda on what needs to be done to make it happen
Framework V - Reach, Range & Manoeuvrability

- IT-specific framework that suggests that IT strategic decisions should be deliberated in terms of three fundamental & overarching vectors
  I. Reach
  - IT architecture investment should focus on continually increasing the reach of the architecture
  - Defines who can access information, from where, with what security, interfaces & in what mode

Reach

- Domain includes both within/outside the business
- Enables creating virtual organisational structures & bonding with value chain partners

Range cont

- IT architecture investment should focus on continually increasing the range of the architecture
  - Defines what forms & structures of information can be accessed
  - Domain is both within/outside business
  - Enables virtual business & integration with value chain partners

Manoeuvrability

- IT architecture investment should focus on continually increasing the manoeuvrability of the architecture
  - Defines the options available to alter the configurations of HW/SW
  - Addresses portability, scalability, adherence to standards, reconfigurability & modularity

Question

- Q. Given a finite budget & set of user demands what combinations of moves that increase range, reach & manoeuvrability will yield the maximum utility to the business?

- The permanent quest of IT strategy is to achieve the unobtainable state of perfect reach, range & manoeuvrability
- It is the differences in the pursuit of that quest that makes the difference to IT advantage
The End