Lernkartei «SI»

Service Innovation

HSLU-T A, Autumn Term 2013

SI TE01:

Introduction

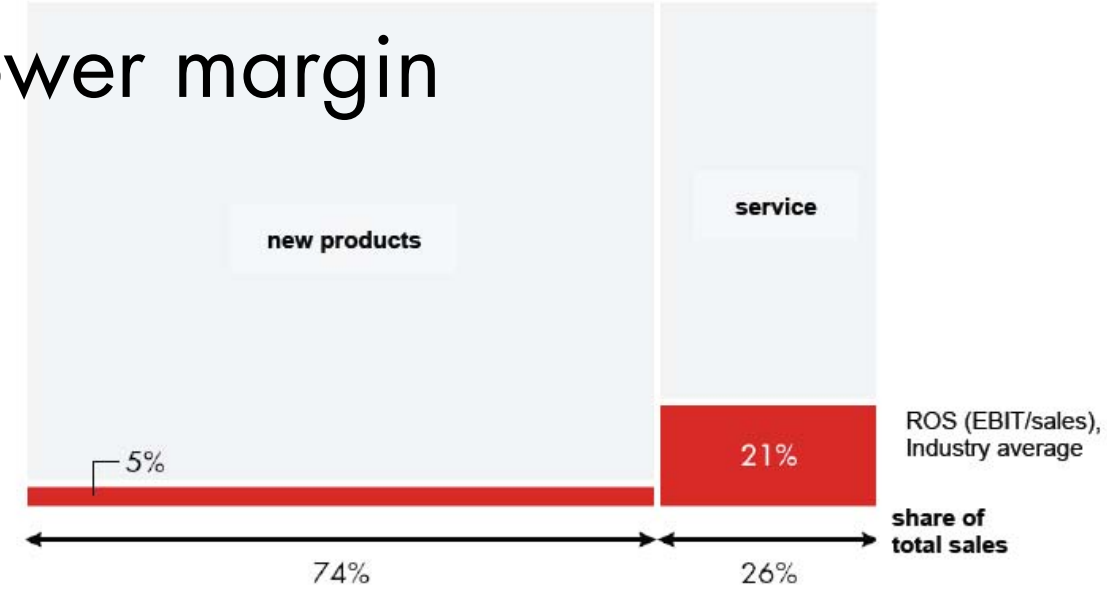
Services enjoy higher margins and improved cash generation. Why?

New products

- More competition
- Fight for price → lower margin

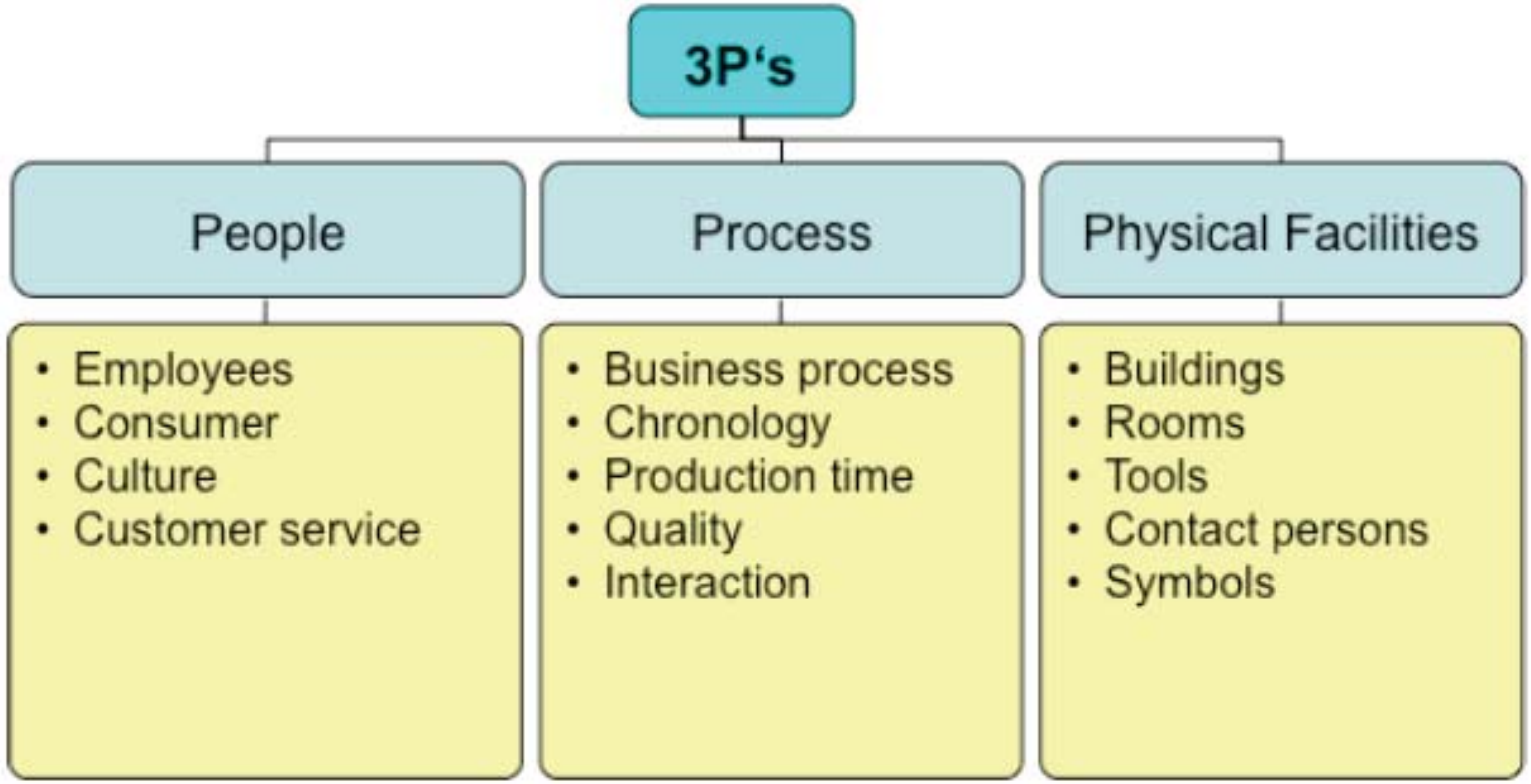
Service

- «Lock in» effect



Value in most of product-driven businesses comes from services.

Service
3 P's


3P's
People
Process
Physical Facilities
• Employees
• Consumer
• Culture
• Customer service
• Business process
• Chronology
• Production time
• Quality
• Interaction
• Buildings
• Rooms
• Tools
• Contact persons
• Symbols

What the best in the pack to do win

- Customer/service-oriented culture
- Clearly defined strategy
- Value services for the sake of service
- Adapt business models
- Collaborate with customers and partners
- Know their customers and the installed base
- Creativity and ‘eyes wide open’
- Leadership seen on ‘shop-floor’ spreading the message (and enforcing the culture

➔ Service innovation is all about make them feel you’re great

What you must know before you can innovate in service?

You have to know…

- Know your past
- Know your capacities and where to acquire new one
- Know your market
- Know your customer(s and their markets
- Know your people
- Know your culture

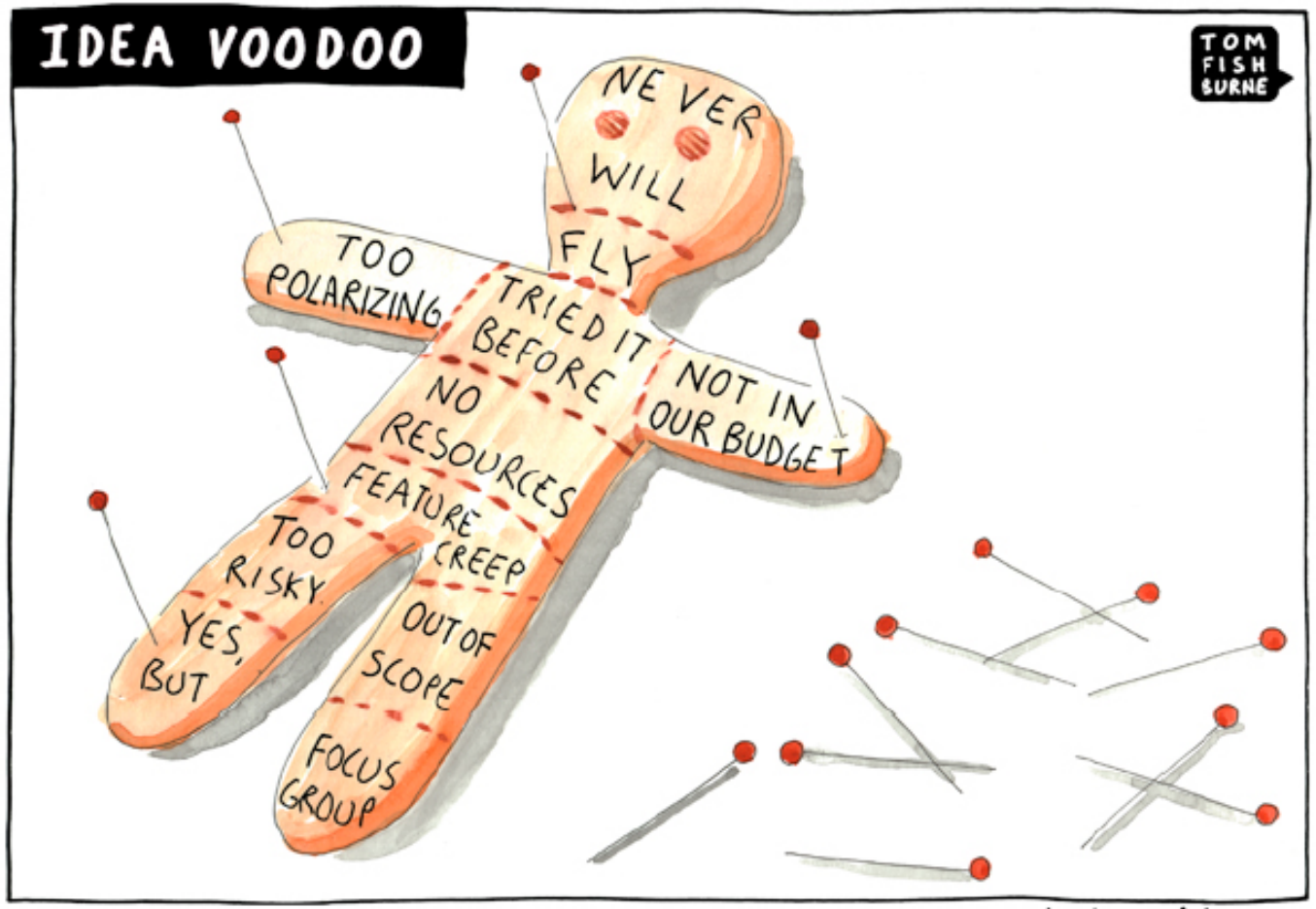
➔ You can then innovate in service

What you must know before you can innovate in service?

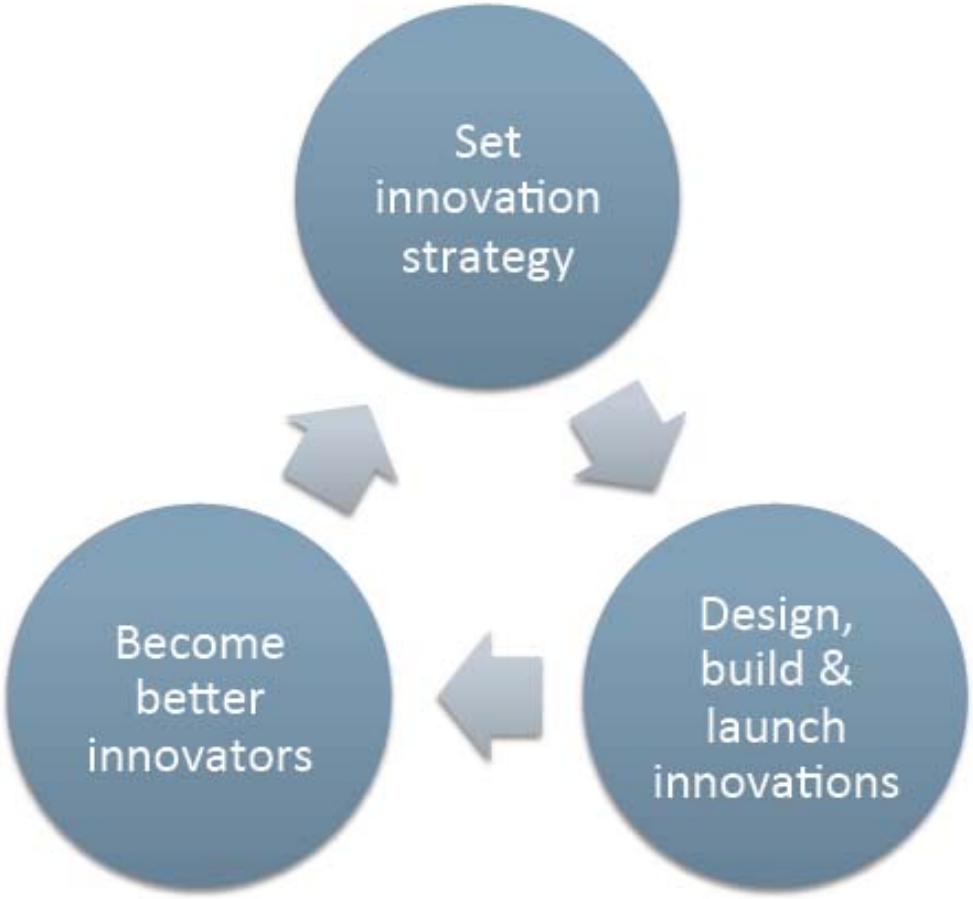
Service Alliance

- Service Alliance – we need to managing the four key service enablers

What kills service innovation?

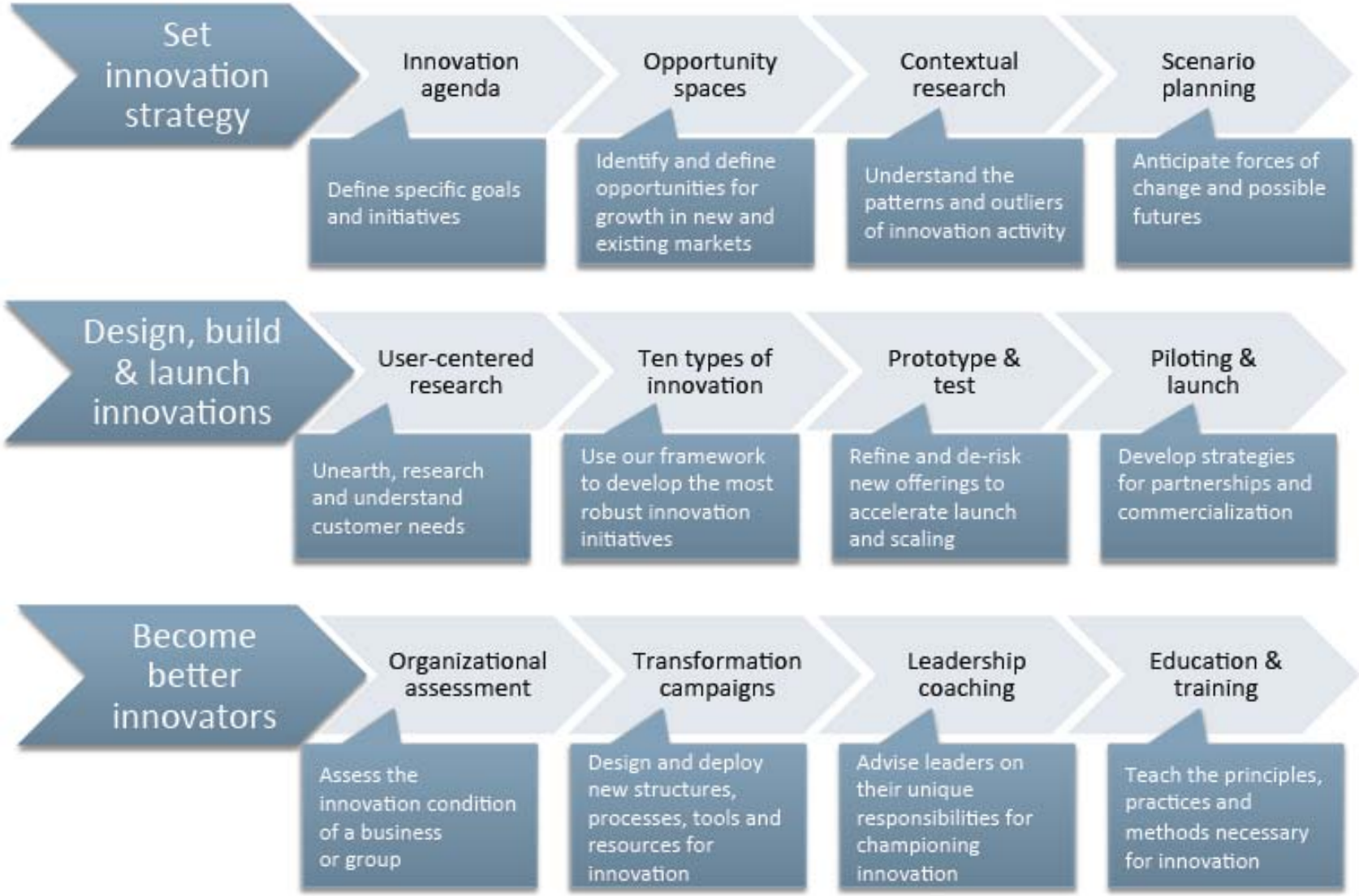


Doblin's Model of Innovation
Circle



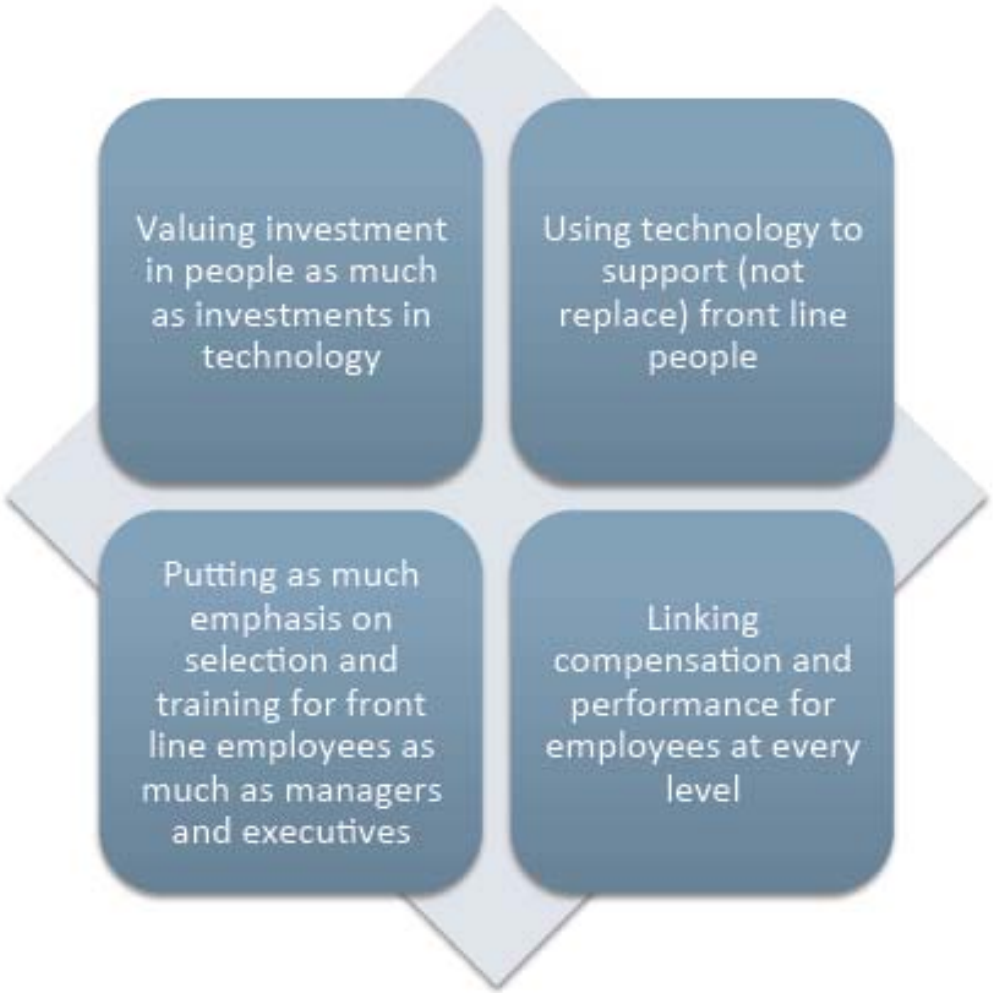
Doblin's Model of Innovation

Process Steps



Schlesinger and Heskett's model

Employees are not disposable



SI TE02:

Understanding Culture

Manufacturing vs. Service
Differences according literature

	Service based	Technology (production) based
Mathieu	Humanistically; Supporting the customer; Client-based innovation	Technocratically; Supporting product; Efficiency based innovation
Herrmann	Emotional/Form	Factual/Future
Bretani	Combined production and delivery	Separate production and delivery
Kotler	Service with minor goods	Tangible goods with minor services
Coppett	Service creates value	Service is a cost
Normman	Simple structures	Complex structures

More of the value in services is from the intangibles

Mathieu's 3x3 Matrix

- Organizational intensity axis
  - Tactically
  - Strategically
  - Cultural
- Service specificity axis
  - Customer service
  - Product service
  - Service as a product

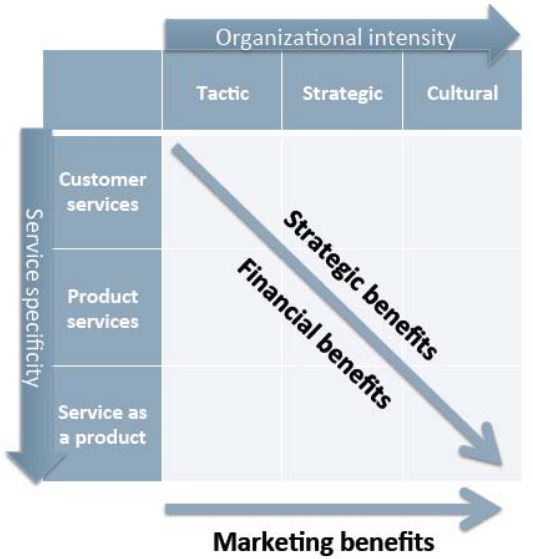
Mathieu's 3x3 matrix allows for benchmarking

Mathieu's 3x3 Matrix

Move

- Moving into the bottom right hand corner can create major market benefits
  - Improved services
  - Improved customer satisfaction
- Improve sales volumes and margins

- Change in behaviour to a more service orientated approach has risks
- Increasing the service specificity has political risks (as much of the organisation will be against the new focus
- Both changes have real financial costs

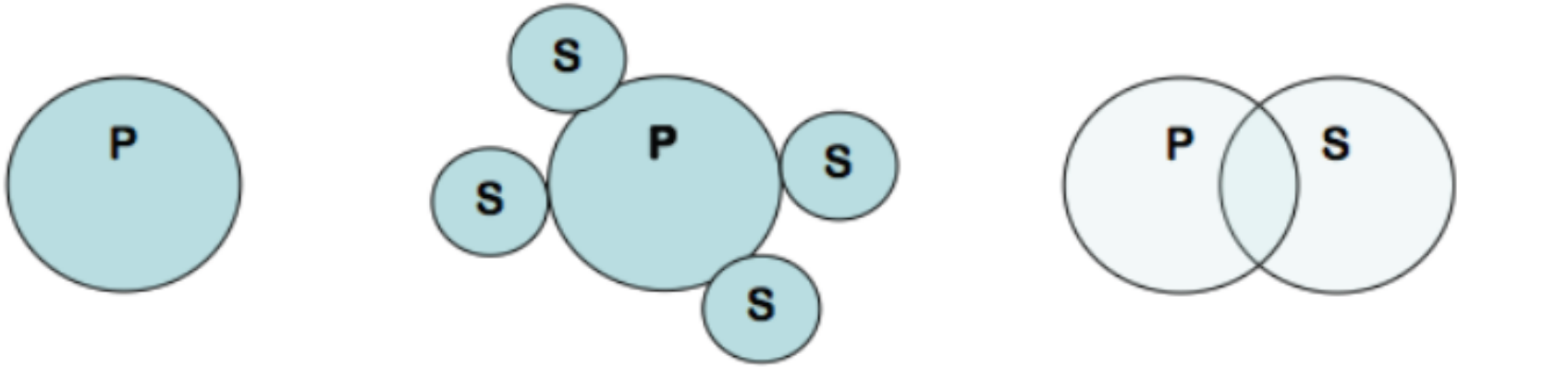


«Servitization»
by Vandermerwe and Rada

Product (or service)
Product = value
Service = cost

Core product with added service (Servicing)
Product = value
Service = differentiation

Product-service system
Product + service = value

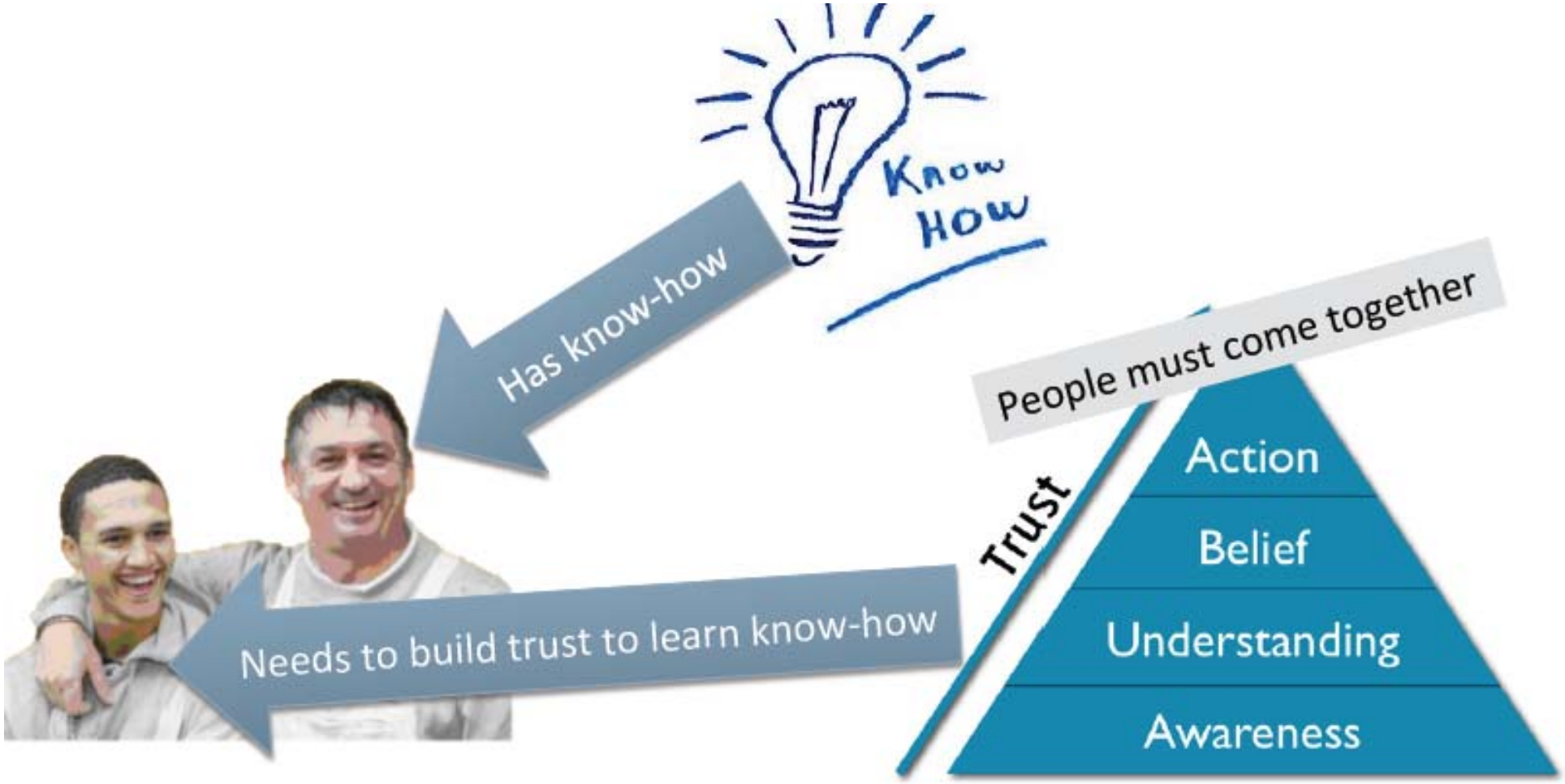


Service is a bolt-on

Increasing servitization

The measure is similar and provides a different view

Where is the know-how in the service organisation?



Polanyi model of knowledge creation

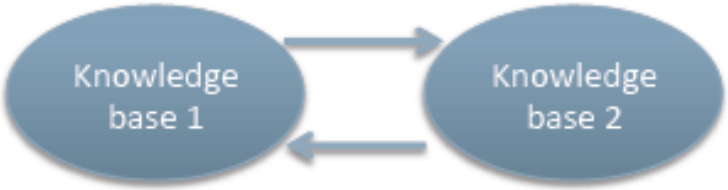
...distinction, pioneered by Polanyi (1967), between **tacit knowledge**, which essentially represents "know how" (the subjective knowledge), and **explicit knowledge**, "knowing about" (the objective knowledge). Explicit knowledge (available in the form of formulas, technical specifications, or embedded in equipment, computer programes, and so on) is relatively easy to transfer and store...

Most service shops relay on tacit know how (or subjective knowledge)

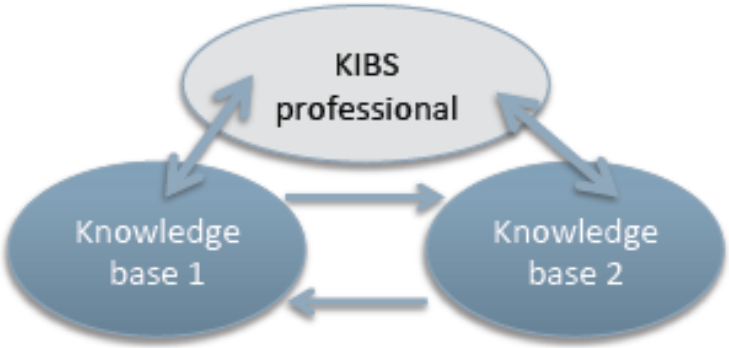
Knowledge--intensive business service models and sharing of know-how is complex and hard to achieve successfully

- The Hertog (2000) model can be modified (assume all service centers independent)
  - 1. Limited sharing of know-how (via personal networks)
  - 2. KIBS broker know-how transfer
  - 3. Sharing becomes the norm

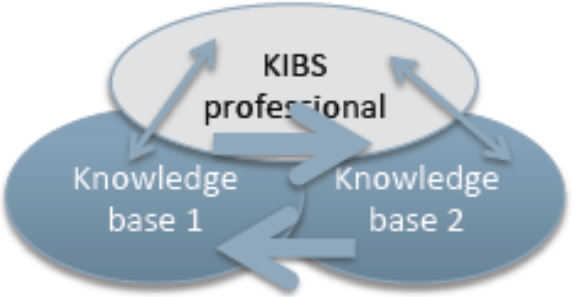
1. Embryonic/limited sharing



2. Sharing facilitated



3. Networked sharing



Hertog, 2000, modified

Setting up a know-how exchange network

Benefits

- Faster innovation
- Faster/more duplication
- Reduced risks

Setting up a know-how exchange network

Barriers

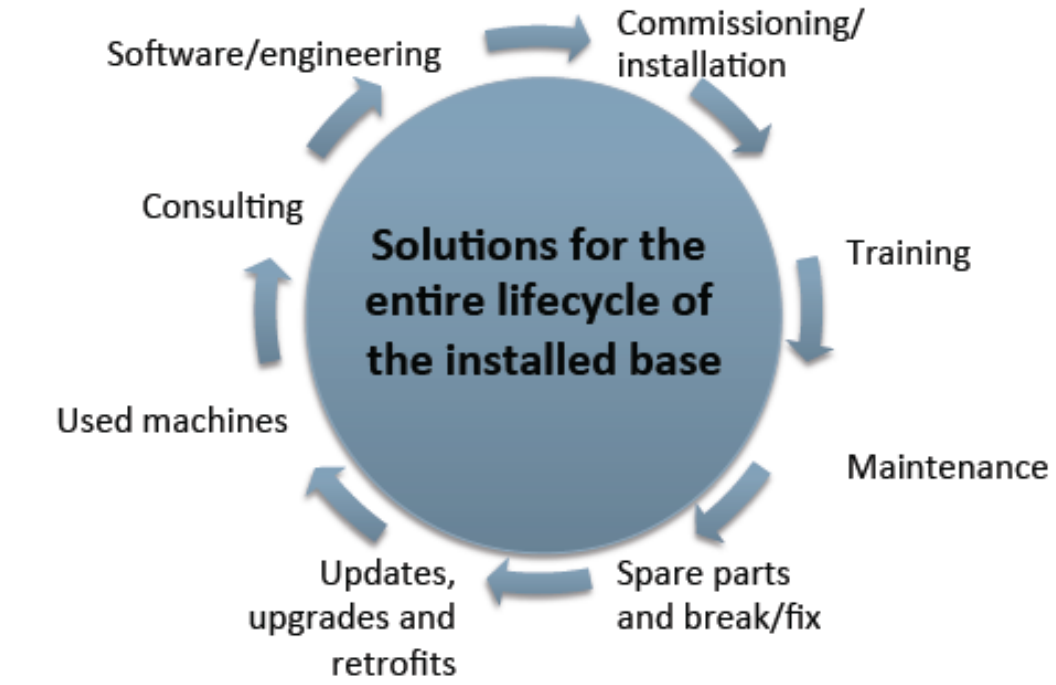
- The (KIBS broker(s must be accepted by both (all parties
- The cost of a full–time person to coordinate is high (salary plus travel
- Additional costs for creating know–how system (for operations and sales
- Local service staff must experience work in other locations

SI TE03:

Life cycles for engineered products

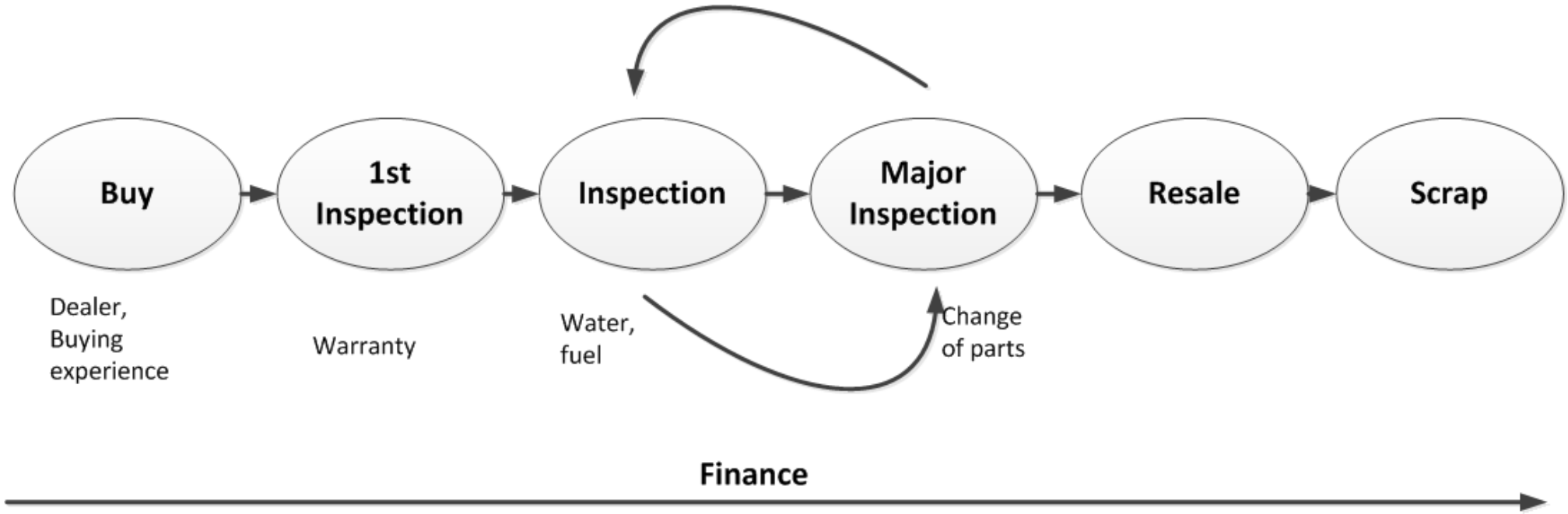
Life Cycle of engineered products

Generic view

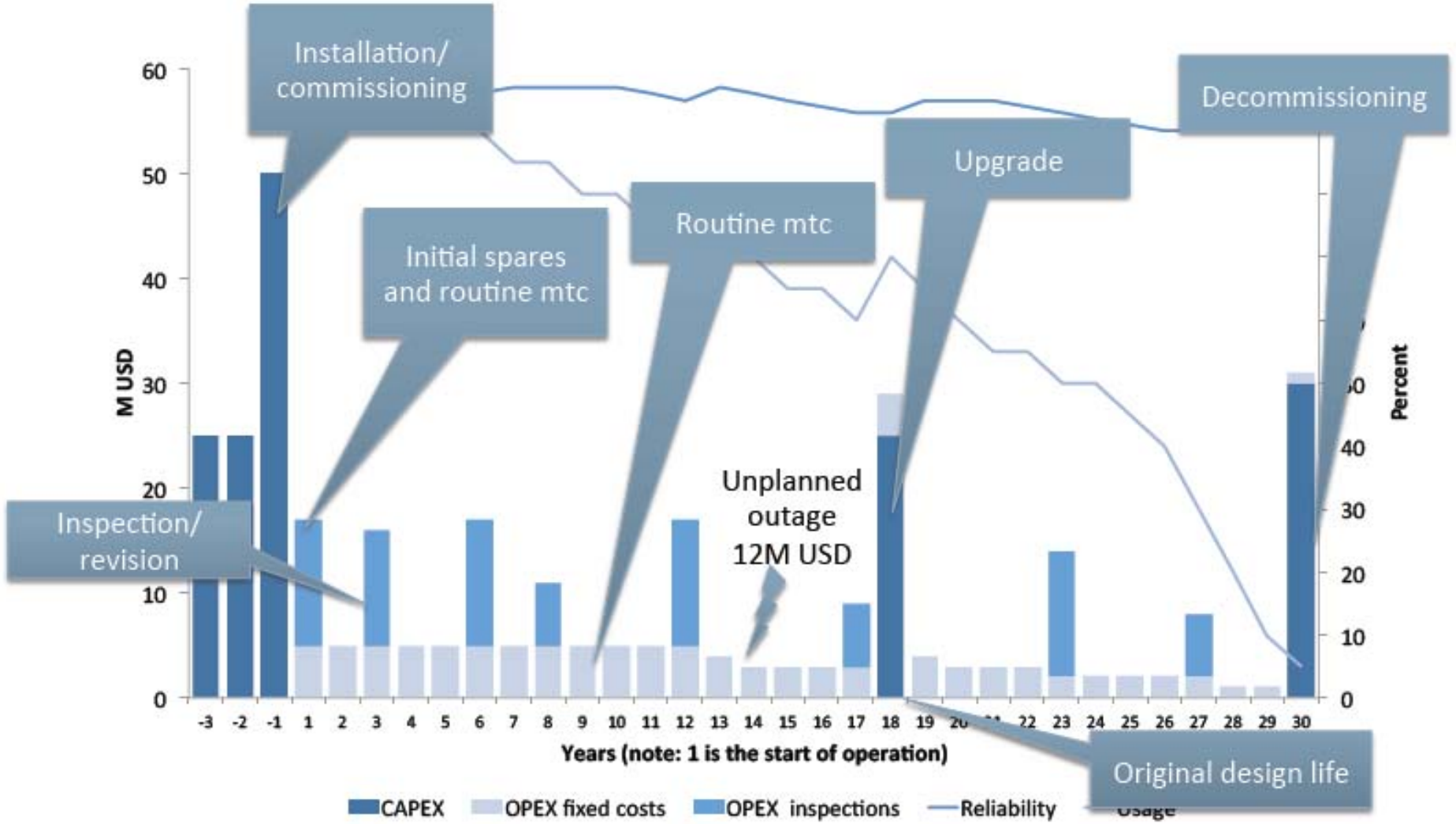


Roland Berger (2012)

Life-Cycle
Car



When are the services typicalle consumed during the life of the equipment



Service Mix

Services	Service sales share		EBIT	Cycle
Commissioning/installation		20%	$	CAPEX
Training		3%	$$$	CAPEX/GDP
Maintenance contracts		5%	$$$	GDP
Maintenance/inspections		16%	$$	GDP
Spare parts		40%	$$$$	GDP
Updates, upgrades and retrofits		5%	$$	CAPEX
Software/engineering		2%	$	GDP
Other		9%	$	CAPEX/GDP

$ = 5% ROS (approx)

Calculating the value of a break-down

- HV motor service for dumper truck→. What are the value drivers?
- Copper price is a major driver
- In 2011 every tonne of copper was worth 8k USD
- Each truck can carry 300 tonnes or ore
- Ore yields typically 3%, each truck can make a round trip in 2 hours, average time to repair 3 days
- Lost production (back of envelope
  - 8,000 x 300 x 3% x 3 x 24÷2 = 2.6M USD
    24÷2 = Number of round trips per day

Power-by-the-hour as a tool to align drivers in aerospace

Rolls-Royce celebrates 50th anniversary of Power-by-the-Hour

…'Power-by-the-Hour', a Rolls-Royce trademark, was invented in 1962 to support the Viper engine on the de Havilland/Hawker Siddeley 125 business jet. A complete engine and accessory replacement service was offered on a fixed-cost-per-flying-hour basis. This aligned the interests of the manufacturer and operator, who only paid for engines that performed well… RR, 2012

Services provided

- Engine Repair and Overhaul
- TotalCare work scope
- Engine Reliability Improvement
- Comprehensive Engine Health Monitoring (EHM)
- TotalCare Service Integration
- Specialist Line Maintenance

Owner/operator benefits

- Low risk, fixed cost maintenance
- Reduced management burden
- Enhanced aircraft resale value
- Increased aircraft availability
- Reduced capital investment
- 24/7

What value for spares?

- **Understanding how to create a price based on customer value.**
- Spares parts are normally sold with a mark-up of 100-250%
- OEMs typical use a price list
- Owners/operators normally negotiate discount to the list price when buying the equipment
-
- ➔ What is the value of one spare part needed to complete the inspection? (Assumption here is the owner does not have the item on stock

SI TE04:

Value of unknown needs

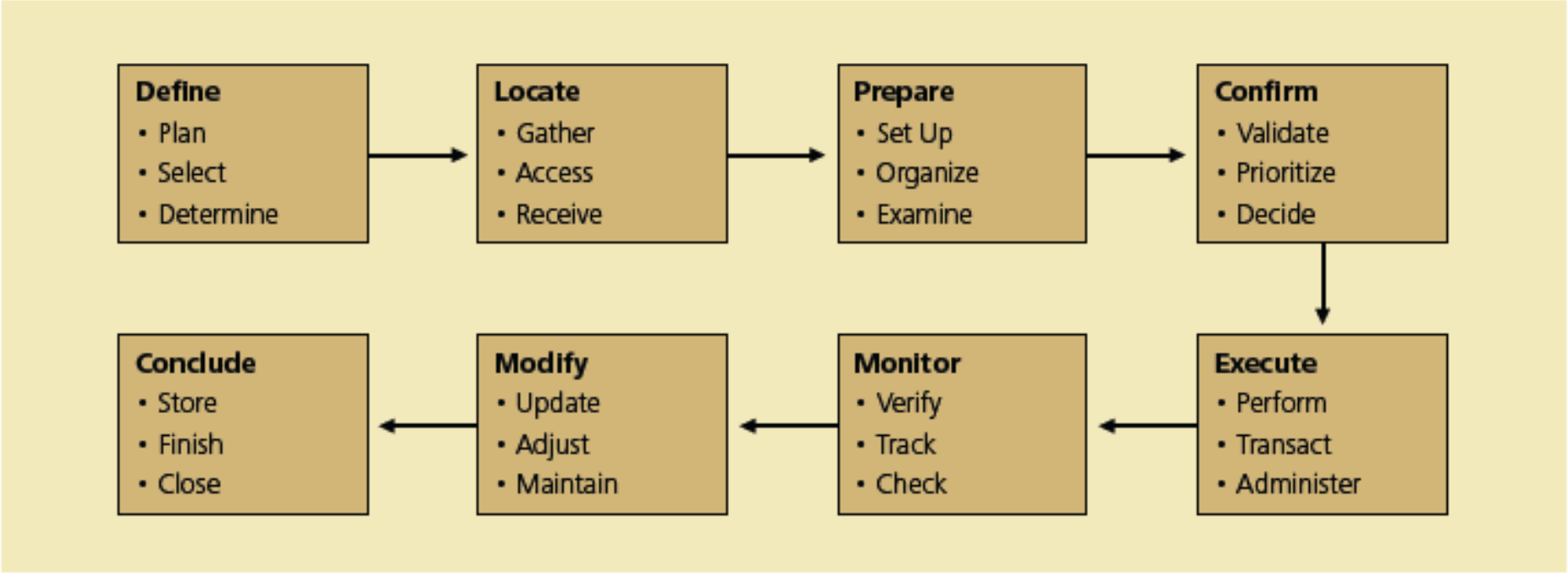
Why are hidden needs so important?

- Hidden needs go beyond normal service improvements
- There is the opportunity to discover new markets – or to disrupt the existing
- It improves alignment of business drivers between the owner/operator and the service provider

- Always consider ‘outcomes’ with service innovation

Ulwick's universal job map

- A job map provides the structure needed to ensure all customer needs are captured



Capturing customer inputs according to Ulwick

- 'Innovation demands more than just the voice of the customer', Ulwick 2005
- What 3 issue plague the requirements gathering process?
  - lack of standard definitions
  - Perception of company ability to obtain good customer input
  - Too much effort placed on how to capture data rather than collecting the right information

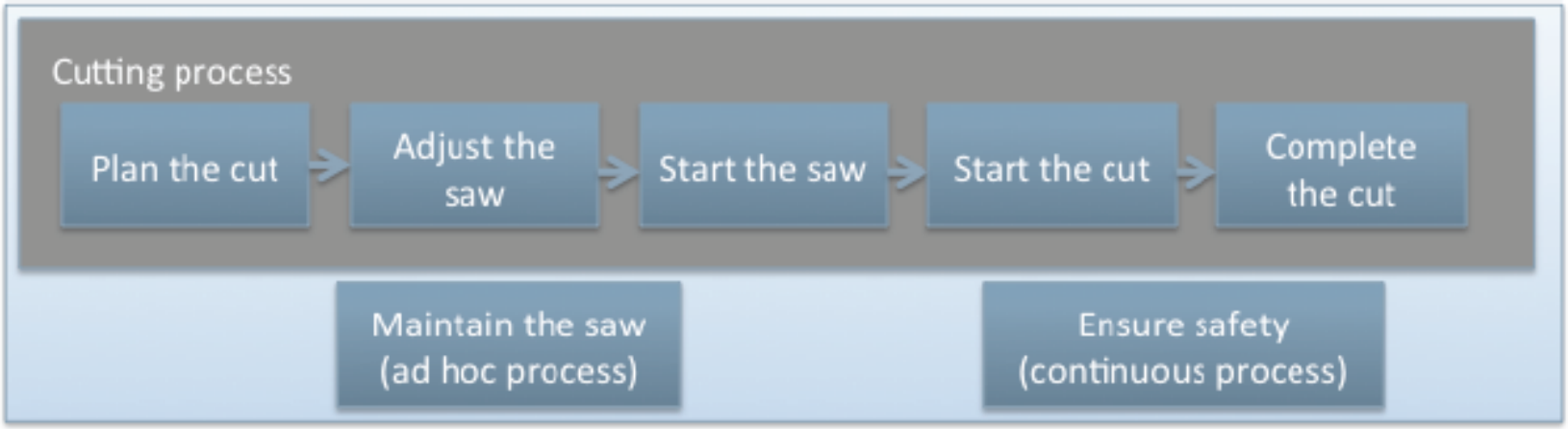
➔ We need to ask questions that allow us to learn about their business and how they consume services (and use theequipment

Developing a outcome-driven questioning system

Better to ask, 'what are you trying to achieve by using *product/service x*' as this is **outcome-driven:**

- ✓ Minimize the kick that occurs when starting the saw
- ✓ Minimize the likelihood that the blade guard will snag

For many jobs you will see 50-150 desired outcomes – this takes time and effort



Formula:
direction + measure + outcome desired

Application:
Every step in the overall process

The opportunity algorithm

- This is a simple calculation based on the outcome driven statements of needs
  - Opportunity = Importance + MAX(Importance-Satisfaction, 0
    Importance and Satisfaction 0–10 score

Segmentation
Conventional

- By market: O G, Power, Marine, Petrochem, Paper etc
- By region: EMEA, Asia, BRIC etc
- By geography: Switzerland, Florida, Shanghai, etc
- By equipment: Gas turbine, gas engine, HV motor, etc
- By opera=onal mode: peaking, two–shiving, base–load
- By fuel type: electricity, coal, gas, etc – By OEM: Siemens, ABB, Alstom, GE etc
- By Owner type: IPP, state owned, private etc

Segmentation
Outcome-driven

The outcome-driven segmentation process allows us to discover:

- Unique opportunities in mature markets
- Demanding customer segments that would be willing to pay more for more elaborate solutions
- Segments that are unattractive and should not be targeted
- Over–served segments that could be attractive for disruptive innovation
- The best way to enter an existing segment as a new player
- Segments that have high growth potential

N.I.H.
Not Invented Here

If it is this obvious why do companies fail?

- They do not get the 'right' answer back
  - The research may be buried
- Managers consider the results threaten their jobs
  - They made 'wrong' decisions in the past
- There is a need to develop a new competency
  - Many companies just do not have the know-how or experience

http://www.todaysengineer.org/archive/print/vol2num1/v2n1features/nih.htm

Positioning Services

6 important questions

1. Why does the message oven fail to ‘sell’ the true value?
2. What is needed for an effective messaging strategy?
3. What message will be most effective?
4. Should the message be emotional or functional?
5. Can the sales force sell it from day 1?
6. What is the advantage of an outcome–based brand?

SI TE05:

Development of processes

Darwin
Quote

- *"It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change."*

The 6 innovation myths uncovered by Doblin

Myth	Reason why it's a myth
1: Innovation comes from being creative...	Creativity = Ideas, but Innovation = Ideas + Action (put them into practice)
2: Innovation is about creating a hot new product...	New products are swiftly copied and rarely enjoy sustained profits. Virtually everything can be copied successfully. This has always been the case and always will be, it is just getting easier every day
3: Senior executives should stay away from geniuses at work...	Leaders should work to build inspired and inspiring innovation intent. Innovation teams then are free to develop within the constraints set.
4: Financial analytics are paramount…	The future cash-flow is only a guess based on today's assumptions. • What base-line should you measure from? / How accurate are Sales in forecasting Order Intake for 12 months?
5: Seek reliable concepts to ensure success in the marketplace	Reliability often produces predictable, not compelling, experiences This creates more of same, just slightly better. It is important to improve existing products and services It is really key to improve customer-outcomes
6: An innovation 'stage-gate' process is vital...	The stage-gate creates an allure of consistency and predictability. It is slow and cumbersome and suited to some types of product development.

Doblin Model of innovation

1. Business model DELL
how the enterprise makes money

2. Networking
enterprise's structure/ value chain
WAL★MART

5. Product performance Intel® Pentium® 4
basic features, performance and functionality

6. Product system
extended system that surrounds an offering
Microsoft Office

7. Service
how you service your customers
amazon

Finance		Process		Offering			Delivery		
Business model	Networking	Enabling process	Core process	Product performance	Product system	Service	Channel	Brand	Customer experience

3. Enabling process
assembled capabilities
SIEBEL

4. Core process
proprietary processes that add value
GE Capital Aviation Services

8. Channel
how you connect your offerings to your customers
NIKETOWN

9. Brand
how you express your offering's benefit to customers
Virgin

10. Customer experience
how you create an overall experience for customers
LEXUS

www.doblin.com

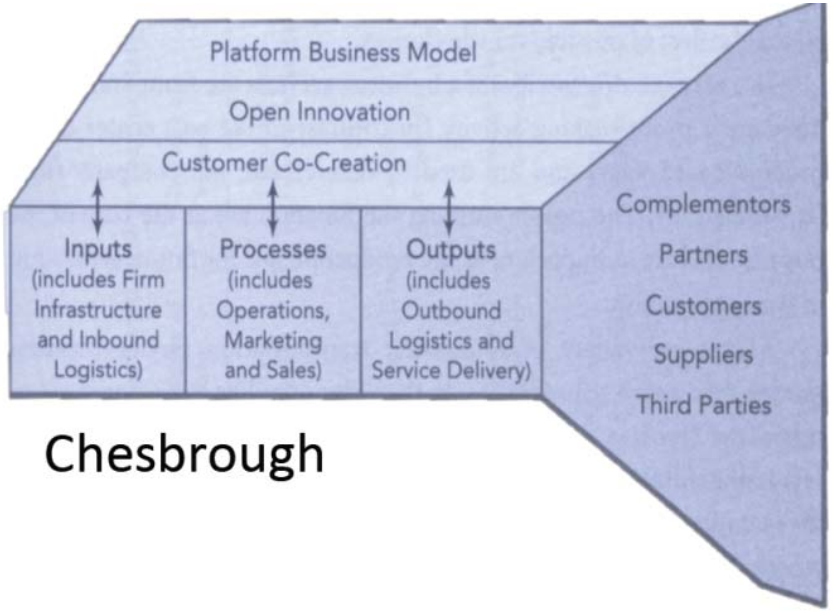
Doblin Model of innovation

Adaptation

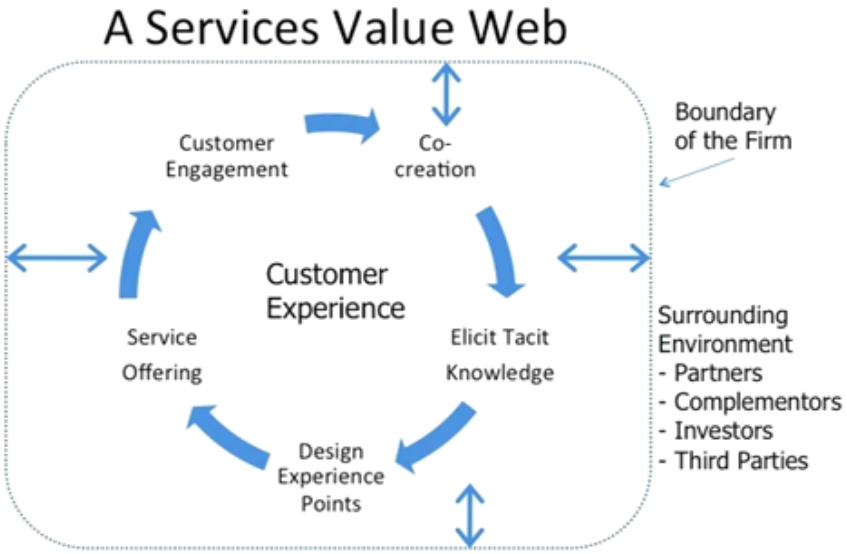
- Because business and the world have evolved over time, the model was changed a bit. Finance and processes now are combined as "Configuration". Also new is that "Service" is added to "Delivery" and renamed to "Experience". This shift was necessary because it's all about customer experience, what a customer wants.

Chesbrough's input to the service innovation process

- Chesbrough's (open services value chain is very different to that of Porter. Porters traditional value chain is about better products, lower costs and higher margins. The center of activity of the Services value chain is the customer experience.
- The value chain highlights:
  - Inputs, outputs and the process
  - Expects a two way relationship with customers and suppliers



Chesbrough



The service innovation process (Ulwick

- High-level view
- Using outcome-based approach as this leads to sustainable advantage

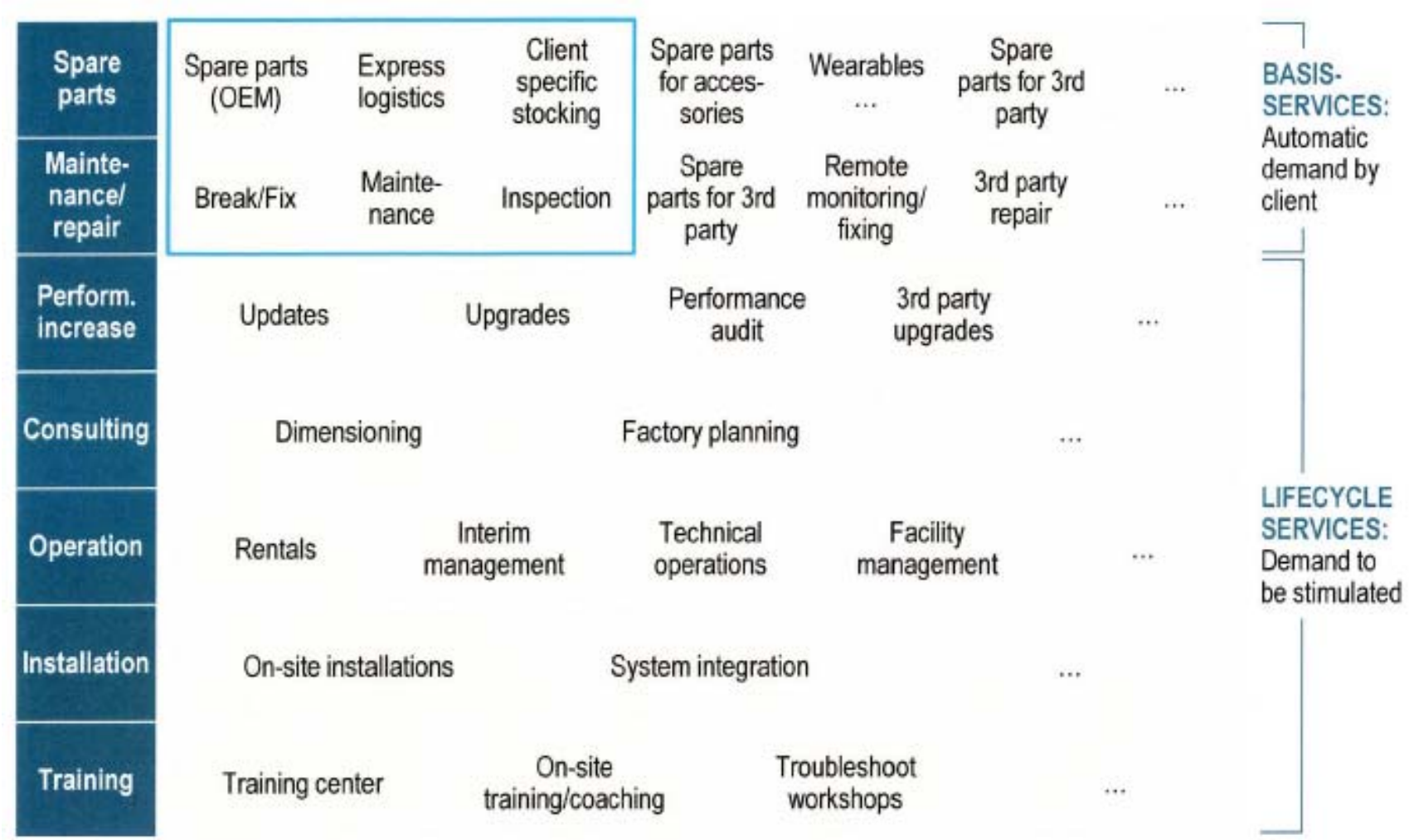
SI TE06:

Defending products with service

High-level range of services for engineered products offered by many OEMs (Bain, 2010

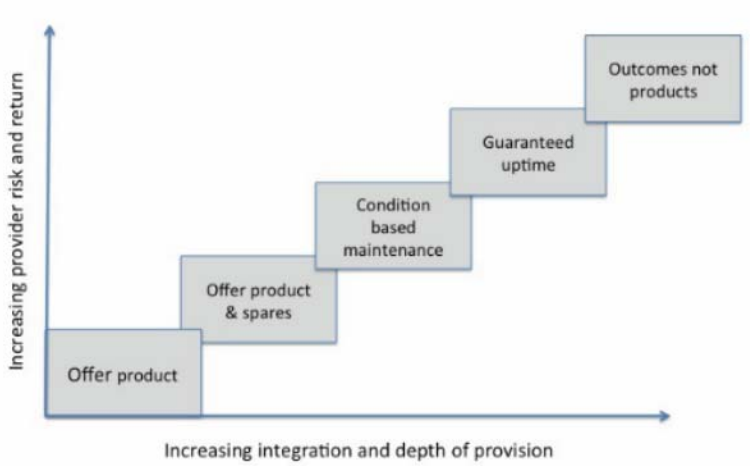
Advanced services (risk/asset transfer)	O&M	Consulting and financial services	
Value adding services (Performance commitments)	Modernization and life extensions	Upgrades	Long term service agreements
Basic services (Warranty backed)	Commissioning	Inspections	Spare parts

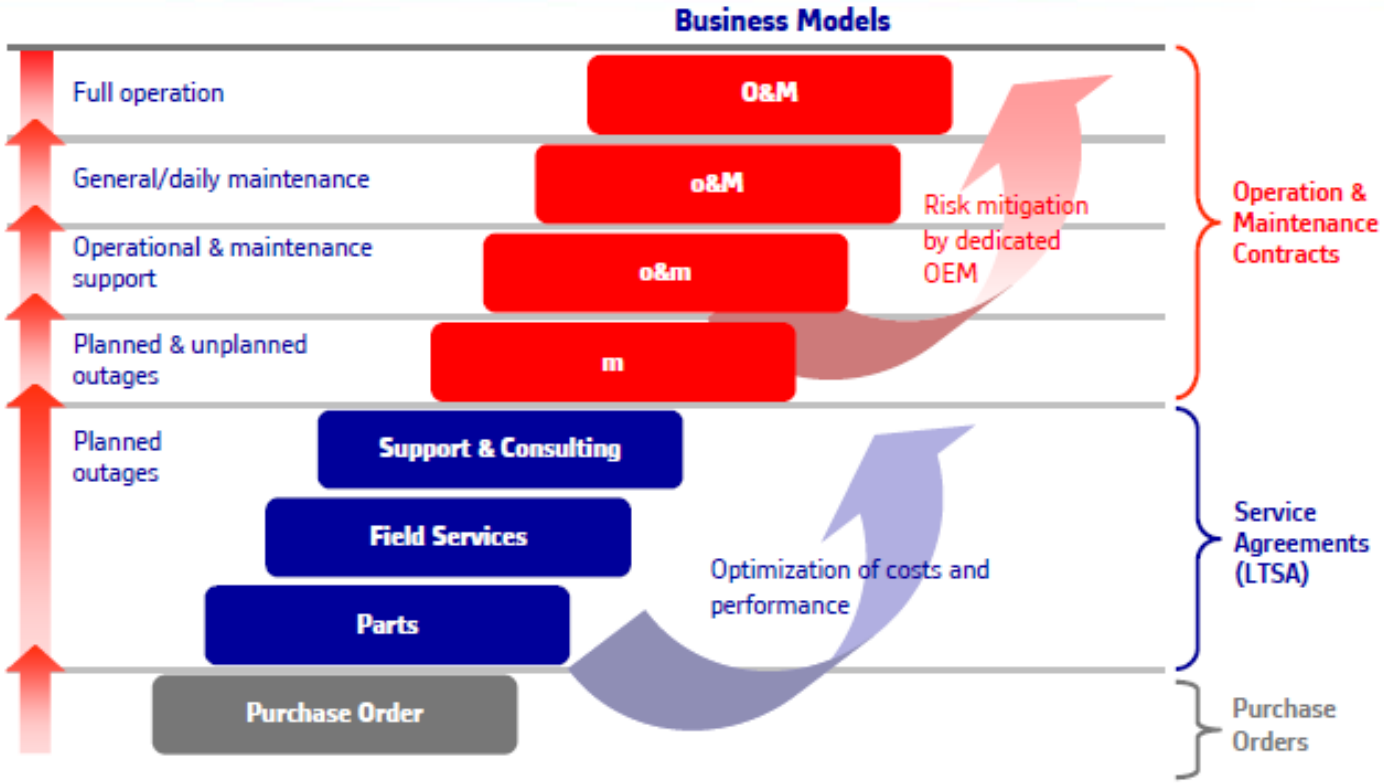
Which services did they use/not use when we look at the specific upgrade? Are there more we could use in the future?



Roland Berger (2012)

The service stair case

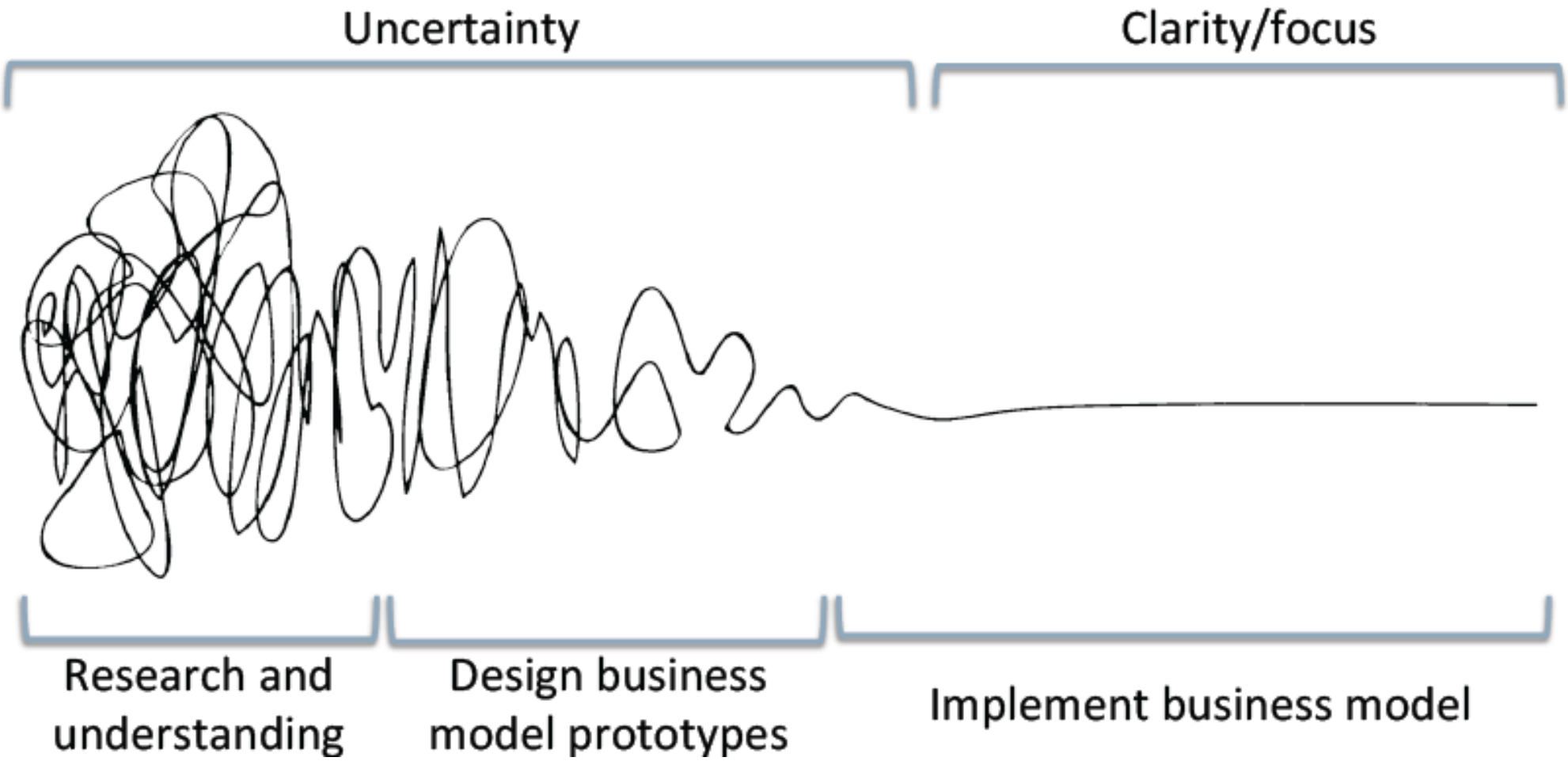




SI TE07:

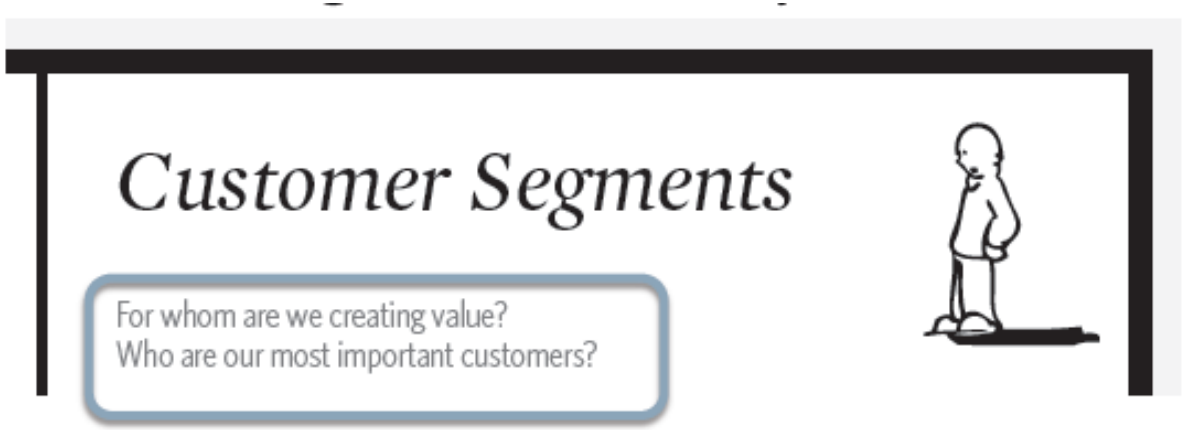
Changing the business model

Business model innovation is something that can be managed, structured into a process and used



Business Model Canvas

Customer Segments



- Their needs require a distinct offer
- They are reached thorough different channels
- They require different types of relationships
- They have different profit levels
- They are willing to pay for different aspects of the offer

Business Model Canvas

Value propositions

- What is the bundle of services (and goods) that are being provided
- What is the newness factor – does the market exist already?
- What is the impact on performance?
- What is the allowable level of customization?
- Does it help with 'getting the job done'?
- Does the design help reinforce the brand?
- How does it work with pricing, cost and risk
- What is the accessibility, convenience and usability

Business Model Canvas
Channels

Channels

Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

'Services' in our language

Channel types			Channel phases				
Own	Direct	Sales force	**1. Awareness** How do we raise awareness of the services and goods?	**2. Evaluation** How do we help customers evaluate the value proposition?	**3. Purchase** What is the purchase process for specific offers?	**4. Delivery** How do we deliver the value proposition to our customers?	**5. After sales** How do we provide post-purchase customer support?
		Web sales					
	Indirect	Own stores					
Partner		Partner stores					
		Wholesaler					
		Agent					

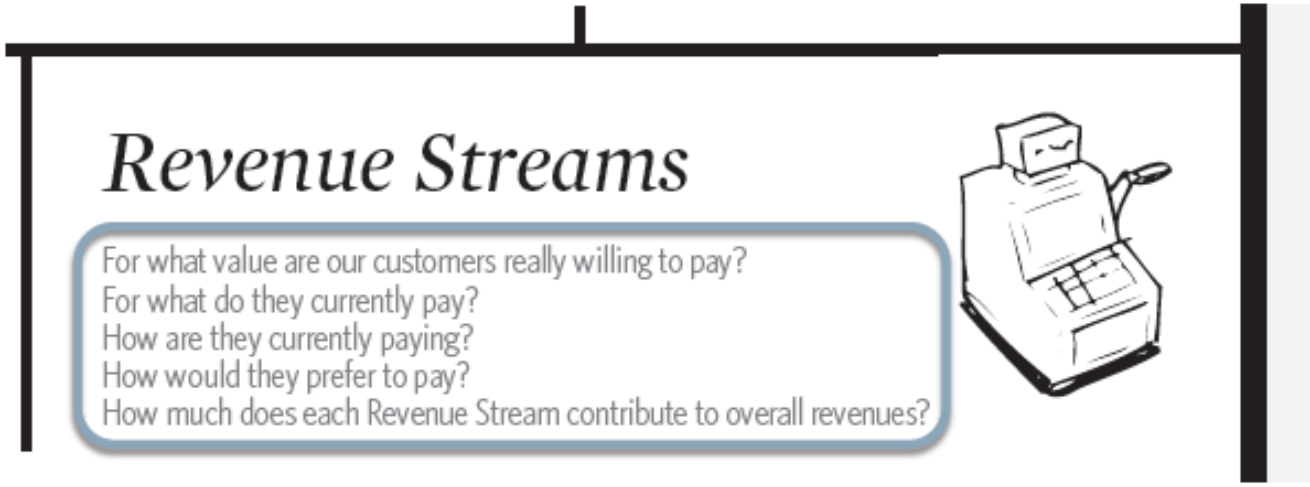
Business Model Canvas

Customer Relationships

- Number of examples
  - Personal assistance
  - Dedicated support
  - Self-service and other more complex automated service
  - Community or user groups
  - Co-creation

Business Model Canvas

Revenue Streams



Types	Fixed pricing	Dynamic pricing
Asset sale Usage fee Subscription Fees Lending/Renting/Leasing Licensing Brokerage fees Advertising	List Price Product feature dependent Customer segment dependent Volume dependent	Negotiation or bargaining Yield Management Real-time-Market

Business Model Canvas

Key resources

- Categories of key resources
  - Physical
  - Intellectual
  - Human
  - Financial

Remember that the resources could be anywhere within the network

Business Model Canvas

Key activities

- The key activities can categorized as
  - Production
  - Problem solving
  - Platform/network

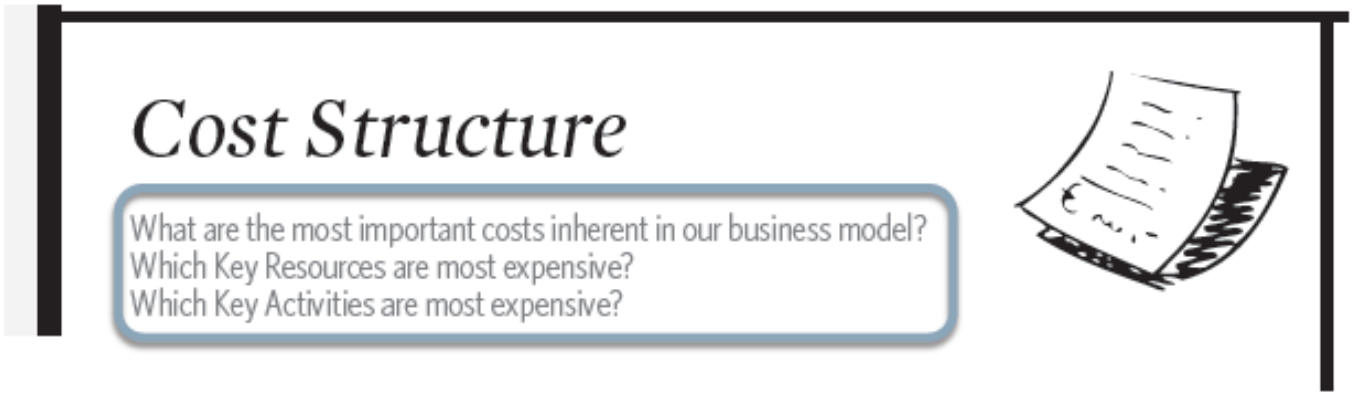
Business Model Canvas

Key partners

- How best to optimize and gain economies of scale?
- How best to reduce risk and uncertainty?
- How to quickly acquire additional resources and activities

Business Model Canvas

Cost structure



- What type of cost structure is best (it should fit with the culture)?
  - Cost-driven
  - Value-driven
- What cost structure does the organization have?
  - Fixed costs and variable costs
  - Are there economies of scale and scope?

SI TE08:

Collecting ideas

Tools, uses and limitations

Tool	Uses	Limitations
Surveys (web or paper)	Simple feedback tool, cheap	Often incomplete or poor returns
Interviews	One-on-one surveys with more in-depth input	Time consuming, selection of interviewees critical
Brainstorming workshop	Good to get feedback within clear guidelines	Risk of group-think without clear moderation
Focus groups	Good for getting more in depth feedback	Need to have good moderation to make sure it works
Kaizen journals	Good for the service team to give instant/direct feedback	Can be hard to review
Post-service feedback	Collection of data on a particular project from the customer	Need to ensure that the feedback form is sent to the 'right' person(s)
Direct observation	Watch and learn with a customer	Costly

Minimum numbers

some general guidelines

- The very minimum amount of data is 40 returns
  - 40 surveys,40 focus groups, 40 interviews, etc
- It may be a mix of some or all
- Quantity here is important to make the date meaningful
  - Over 200 returns would be better as this means there is good data in each segment (and sub segment)
- Many people with ideas are unwilling to share them
- Some great ideas come from problems
  - Often on the edge rather than the 'average'

Who has the ideas when it comes to service innovation

- **Everyone** with a direct contact with the customer has valuable feedback that can become valuable ideas for service innovation
- Everyone who is involved in creating/delivering the service/solution to the customer
- Your customers and your target segment(s)
- Your suppliers and 'want-to-be' suppliers

- The team must be trained, empowered, feel valued before they will hand-over their ideas for service innovation

- Always give feedback to those who provided ideas

What to collect and what not to collect from customers

Collect

- Customer's own process or the criteria they use to measure value
- Intangibles that they value
- Customer's metrics
- Customer outcomes and their importance
- Customer satisfaction
- Processes they have to do but don't like to do

Not collect or ignored

- Customer requirements/ specifications (often too vague)
- Solutions (it is good to collect a list of their problems!)
- A list of needs (often too vague)
- A list of benefits (often too vague)

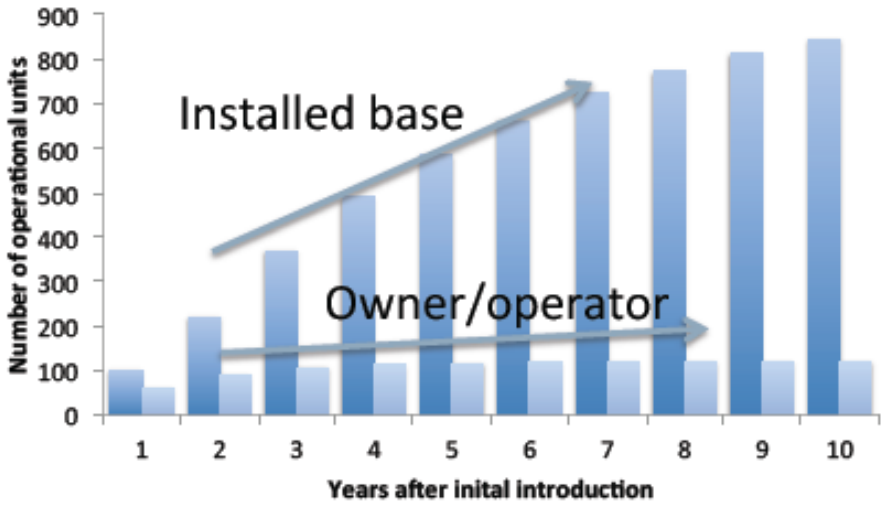
Customers

Customers as a key stakeholder in idea generation – they use the equipment for many years

- Many OEMs use indirect sales channels
  - There are two customer groups: the channel and the owner/operator of the equipment
- Customer company names may not be sufficient
  - Behaviors vary from location to location

New units	indirect sales	100 new units per year 5 channel partners	20 owners/operators per chanel Up to 100 customers

Service	Direct sales		Additional 100 new units per year Up to 100 new customers per year
	Indirect sales (warrenty work)	100 new units per year 5 channel partners	Up to 100 new customers per year



The site, company, equipment data are key for service

When collecting customer data do not trust sales to provide reliable input

- Sales are not viewed as neutral by the customer
  - Use a facilitator
- Sales will tend to focus on 'features' and price
  - This helps them close the next deal rather than innovate
- Remember you have others who have experience points with customers
  - Their input may be more reliable than sales
  - They may have a more contact points with the customer

Some things to remember with a highly visual approach

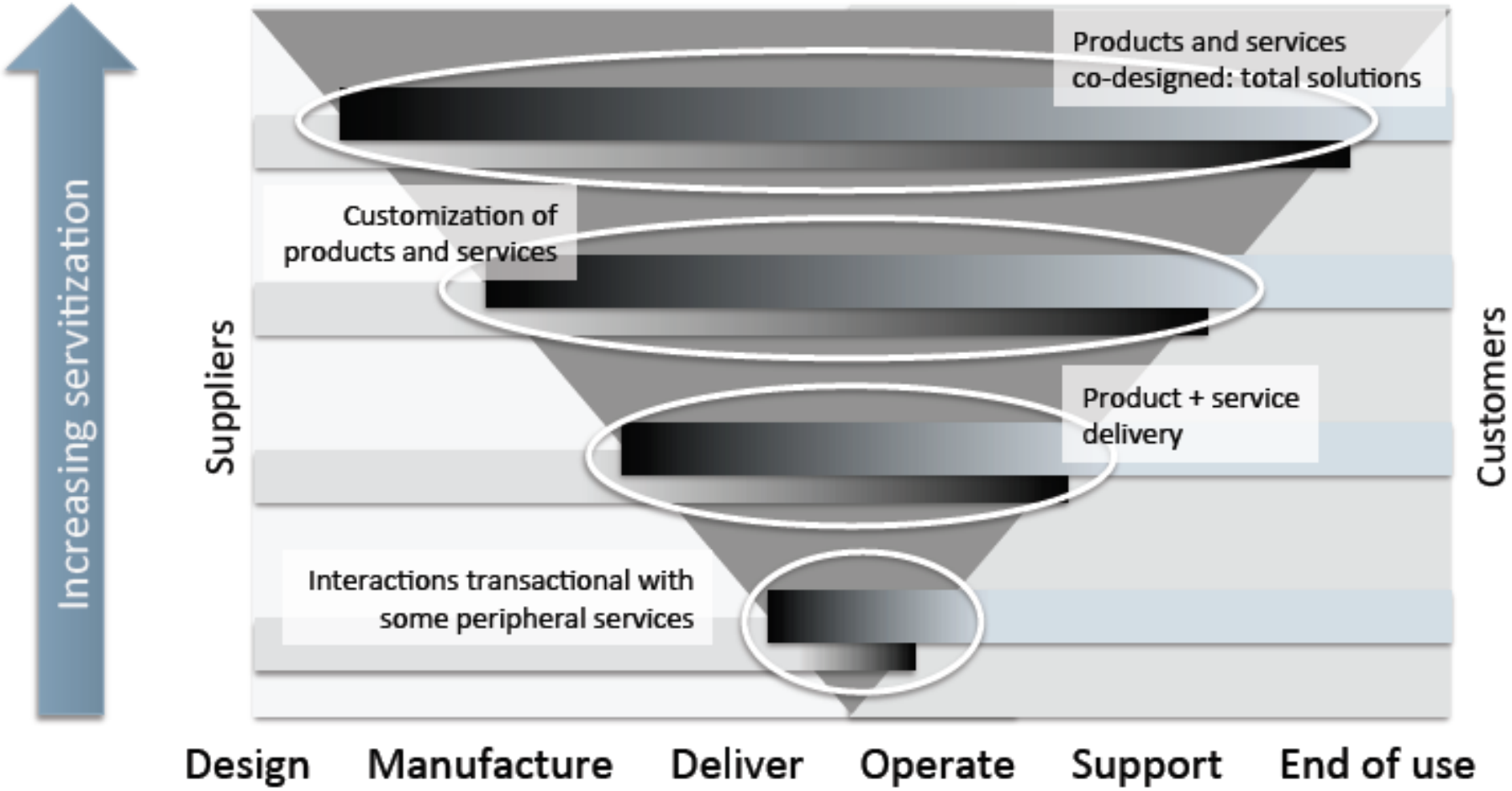
1. Planning is key to know what to use and when
2. Visualize the content as much as possible
3. Capture the big picture rather than the detail
4. Visualize the relationships
5. Collective assumptions
6. Ensure that the language is shared by all
7. Joint understanding
8. Trigger ideas

SI TE09:

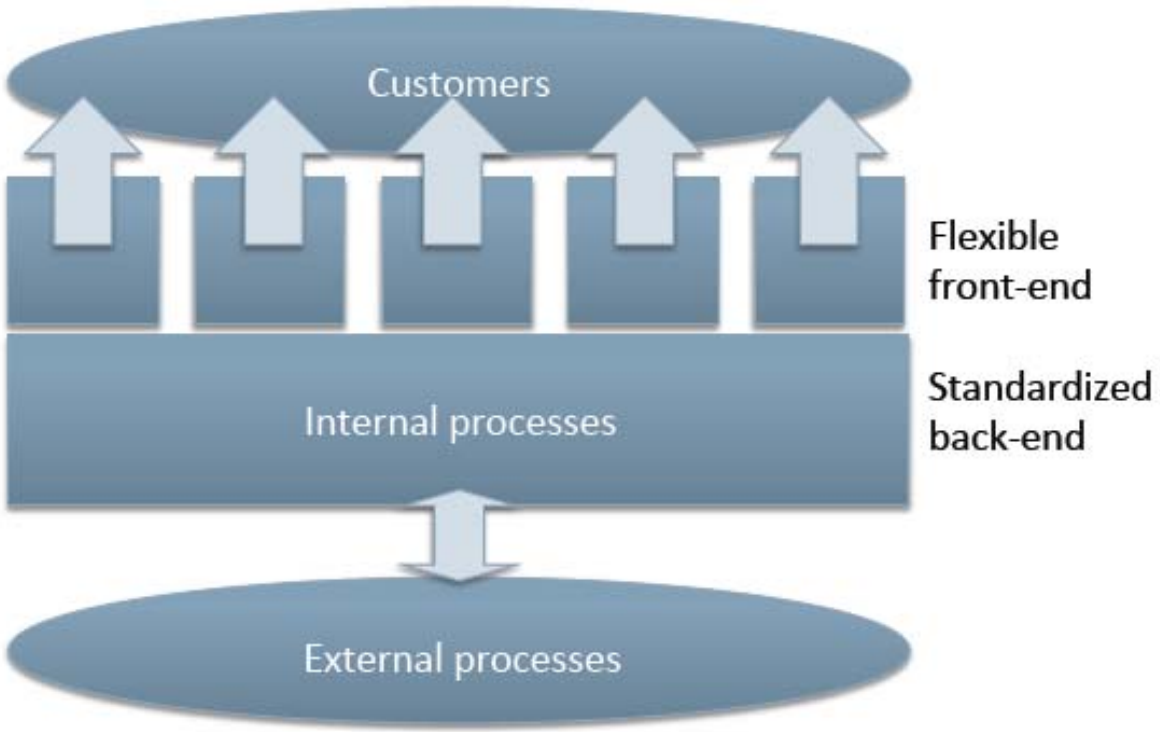
Alignment of driverss

Servitizatin continuum –a view of the customer's supplier interface

This is a helpful model to understand the journey for transforming a manufacturing business into a service organization – it also helps understand service-partnerships



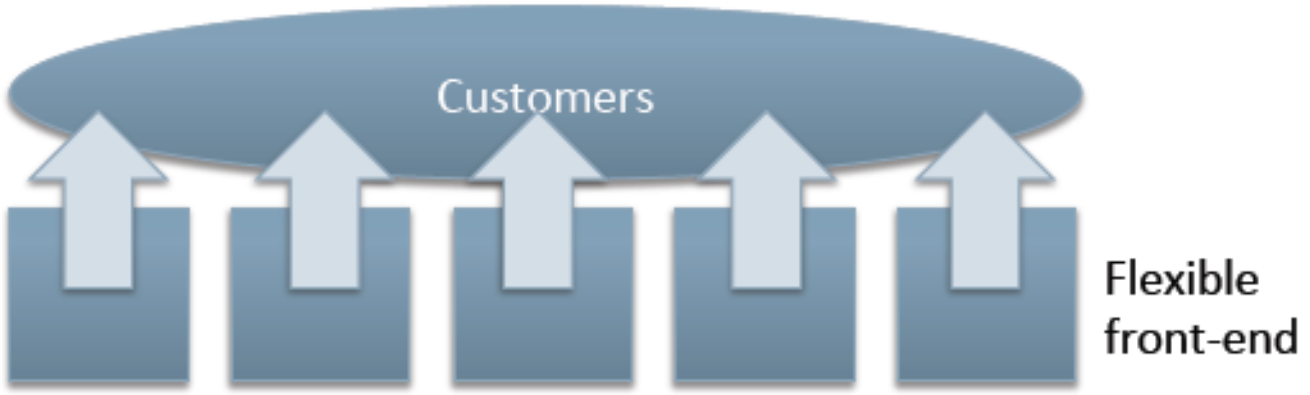
Customized front-end organization with standardized back-end (Chesbrough)



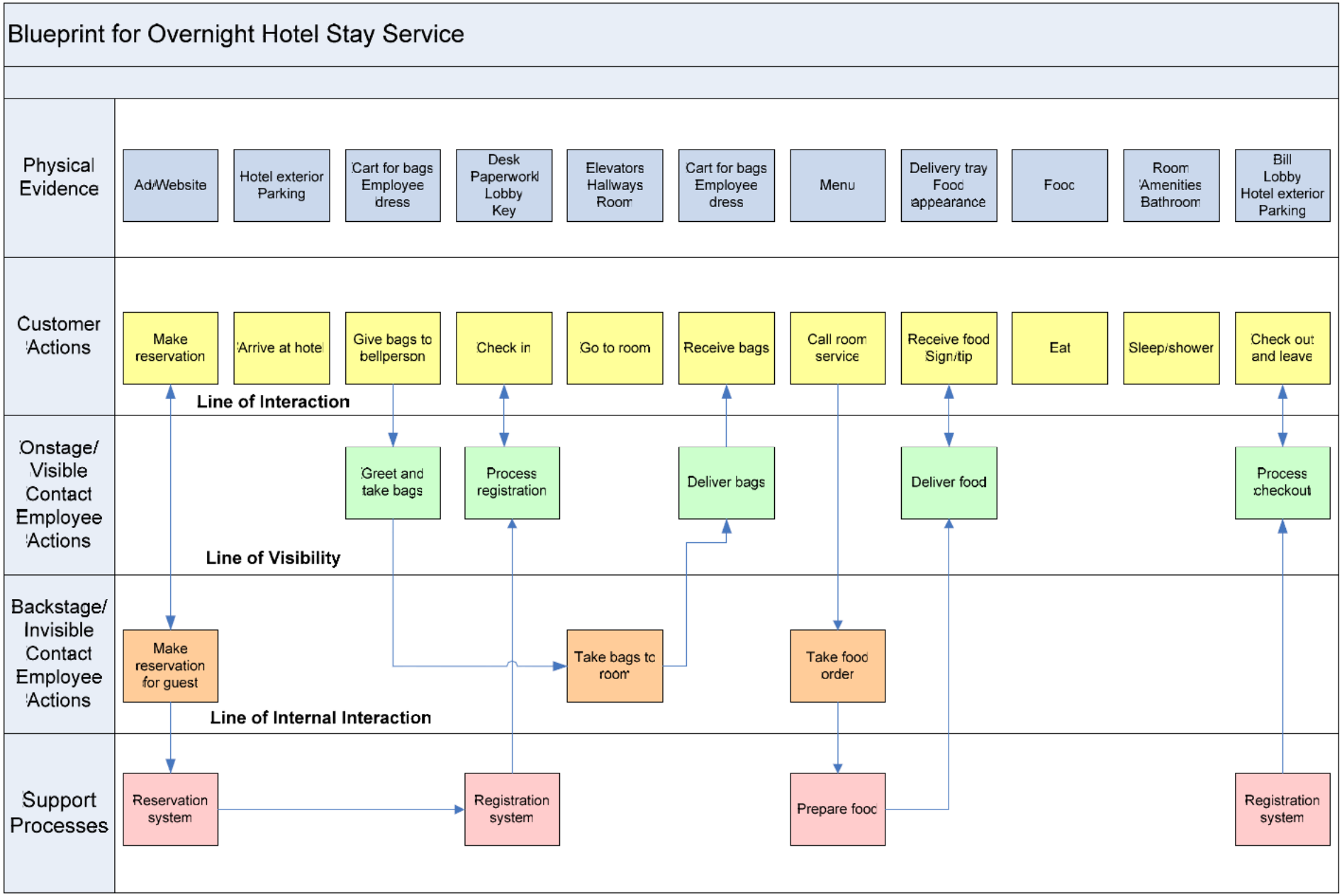
- Standardization provides a bases for cost management (efficiency)
- Standardized processes provide economies of scale
- Standard customer experience for core business processes
  - This is 'the way we are' or 'the way we do things'

How can Chesbrough's model help with services to align service provider and customer benefits?

- The 'pick-and-mix' front end allows customization for the customer
- Customization allows alignment of drivers
- This approach ensures 'economies of scope'
  - The scope is backed up with the customized back-end
  - Additional scope can be added (internally or externally supplied)



Service blueprint



SI TE10:

Creating the right process for service innovation

What was the intention of the standard stage-gate process?

- Product development tool
- For use in larger companies
- To review portfolios

Stage gate system can grow and grow, this does not 'jell' well with the service culture

- Often many forms to complete
- Much of the data unknown by those filling in the system
- Set schedules for reviews
- Often very technical focused
- Often unable to capture the service concept

Product development: months to years

Service innovation: days to weeks

What outcomes do we need from an stage-gate like process to be highly productive?

- Customer focused
- Heavy front-end homework before development starts
- Spiral development-loops with users throughout development
- Holistic and effective cross-functional teams
- Metrics, accountable teams, P&L reports for continuous learning
- Focus and portfolio management
- Lean, saleable and adaptable stage-gate process

Gates are business decision checkpoints

There are different types of innovation

- Incremental or sustaining
- Disruptive/Breakthrough or radical

- **Innovation comes in different sizes and from different 'departments' within and outside the business)**

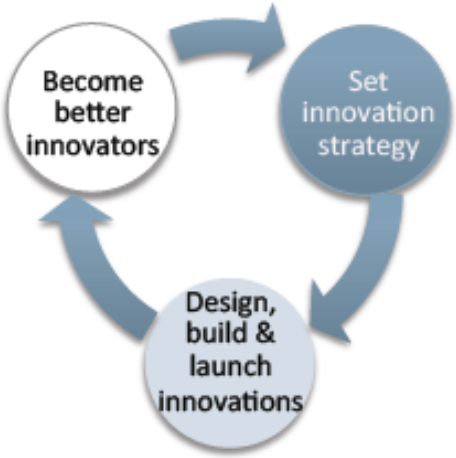
Summary of issues with the stage-gate process in a service environment

- It runs the risk of becoming a technology development tool rather han an innovation tool
- It fails to capture the small day-to-day innovations that are created through necessity in a service organization
- It fails to capture all of the different types of innovation taking place

Simplistic overview of a service innovation process (adapted from Doblin showing the stage-gate process as a key tool

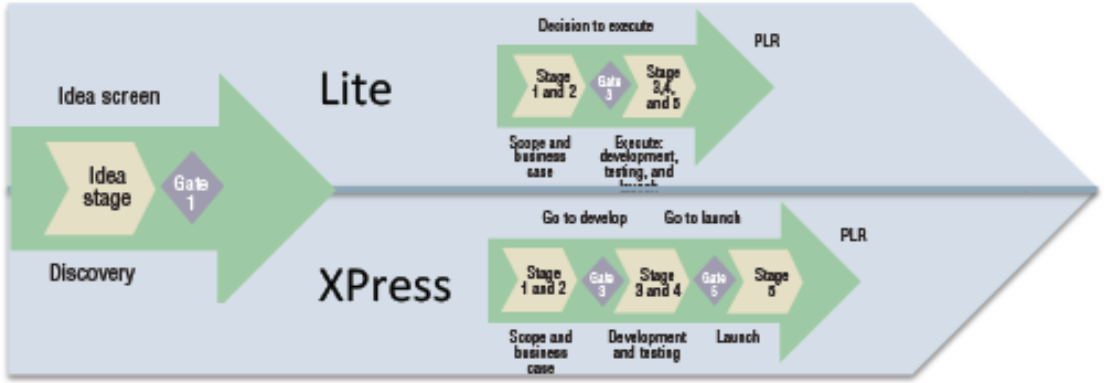
The stage-gate

- Adds discipline to the innovation process
- Must be customized for your business
- Must not become a barrier for ideas
- Is not the only process/tool required for service innovation



Seen-setting

+

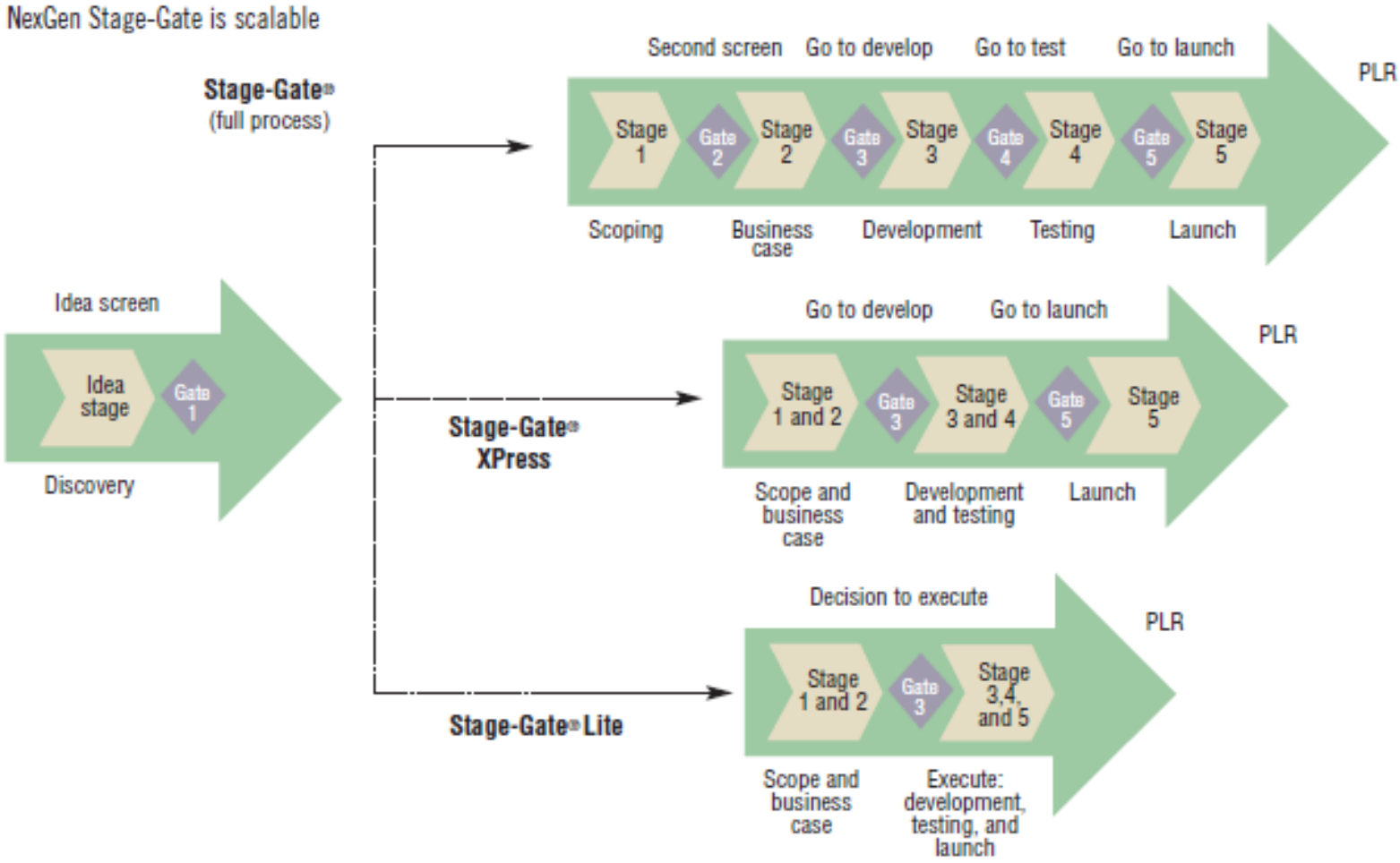


Process control

What is the real value of the stage-gate approach to service innovation?

Stage-gate
Lite and Xpress

- The process Lite and Xpress are more suited to service innovation



'The seven principles of the latest Stage-Gate® method add up to a streamlined, new-product idea-to-launch process', Robert Cooper, 2006

SI TE11:

supporting new technologies / barriers to market entry

Customer contact points

Service	Outcomes	Customer	OEM	Others

Desired outcomes (Ulwick)

- Outcome (direction + unit of measure + outcome desired)

Service concepts

Some ideas

- Supply of the service manual and the list of spares
- Outsourcing (licensing) of service commitments to a local contractor – a solution where there is insufficient income to cover costs
- Provision of individual services on a transitional basis - a traditional 'aftermarket' offering
- 'Pic-and-mix' services on a transitional and annual basis - a simple integrated solution
- Longer-term partnership created by aligning drivers - sharing risks between the parties
- What platforms could we create that would help improve the service delivery, the relationships and raise brand loyalty

Service concepts

Some ideas → Now the MEASUREMENT

- First review of the service concepts from the owner/operator's view point
- Initial review of the service offering using the uncertainty classification
- Where are the service concepts on the service continuum with each service concept?
- Have we been able to create some flexibility in the delivery yet have common internal processes?
- $65,000 question… how do the service concepts help us go to market with this new wave power technology?

SI TE12:

non-OEM services, equipment densities and 2nd tier OEMs

Not covered in class

Why is the installed base SO important?

- Your installed base of equipment should be viewed as your captive market
- It is impera9ve that there is a database showing where all of ‘you’ equipment is and who the final owners/operators are
- The data is there – it must be sought out and converted into information today there must be no excuses…

SI TE13:

Guest speaker

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