

# Towards an Understanding of Sourcing Decisions

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Global Sourcing Workshop, 2011

Global Software Development (GSD)

Information Systems (IS)

Offshoring

Offshore Insourcing

Information Technology (IT)

Outsourcing

Sourcing

Software Development

Software Maintenance

Global Sourcing

Onshore outsourcing

Supply chains

Distributed Development

# Scope

Offshore Insourcing

Software Development:

- Distributed Work
- Transferring of Work



# Background and motivation



# Offshore insourcing decisions

## the starting point

Objective of the decision analysis —  
to maximize the expected utility from the made decision  
based on the chosen strategies

Not all strategies enable realization of expected benefits

Deliberate analysis of factors that influence the  
outcome of the decision is required

# Research overview

Date	Main Research Activity
Jun 2009	Interviews with developers <ul style="list-style-type: none"><li>• two interviews with Indian site representatives</li><li>• three interviews with Swedish site representatives</li></ul>
Oct 2009	Interviews with two product managers
Oct 2009	Research seminar on transfer challenges
Nov 2009	Two group interviews with the transfer project manager and product development manager
Mar 2009-Nov 2010	Monthly research group meetings (16 in total)
Mar 2010	Interview with the Swedish site manager
Aug 2010	Research seminar on transfer decisions



# Findings: decision points

**Why** is an organization making an offshore insourcing decision, what are the expected costs/benefits to be achieved and which costs/benefits are dissatisfactory in the existing setting?

**What** shall be sourced and whether the selected type of work is suitable for the selected offshore insourcing strategy?

**When** shall the offshore insourcing strategy be implemented and whether this will have any effect on the achievement of expected benefits?

**Where** will the work be located and whether the offshore destination is optimal in terms of proximity and skills for the demands of the work and collaboration?

**How** will the work, roles and responsibilities be divided and whether the chosen work division is suitable for the overall offshore insourcing strategy?

# What

example of effect

## EASY:

- Global development of mere IT applications or internet services is fairly easy
- Big savings have been reported for well-defined processes that require little control (e.g. maintenance projects), technical documentation or validation activities

## CHALLENGING:

- Embedded software faces major challenges



# When

example of effect

## EASY:

- ?

## CHALLENGING:

- Transfer in a middle of a release creates extra stress for ongoing operation

# Where

example of effect

## EASY:

- Maturity of the receiving site plays the role of a safety net
- Domain expertise significantly alleviates sourcing implementation
- Sourcing to own subsidiary provides significant level of control

## CHALLENGING:

- High attrition levels cause interruptions in provided services
- Distance influences the ability and ease of traveling and synchronously interacting

# How

example of effect

## EASY:

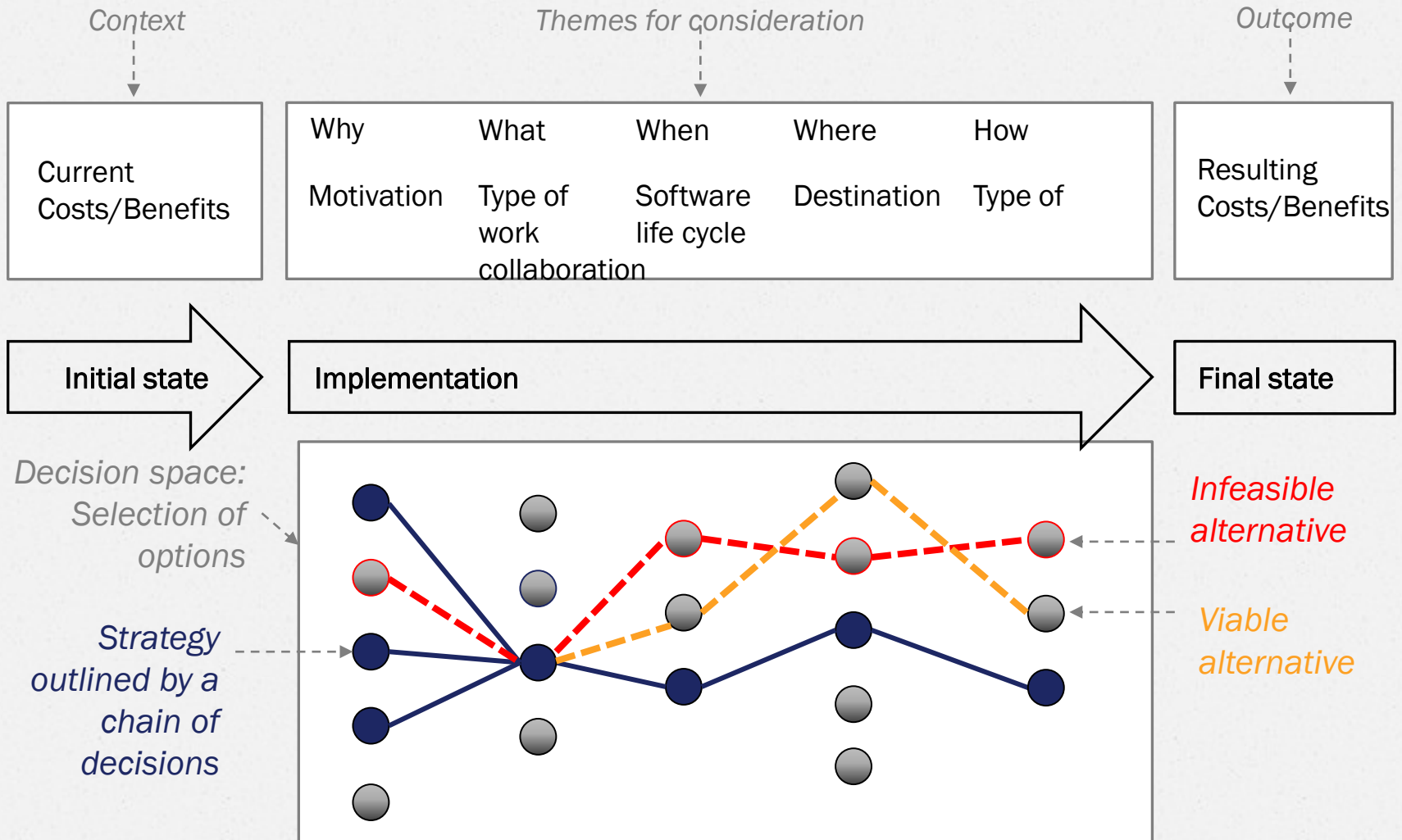
- Allocation of complete component with ownership to a site increases motivation
- Modularization or task decoupling isolates the effect of changes

## CHALLENGING:

- High attrition levels cause interruptions in provided services
- Distance influences the ability and ease of traveling and synchronously interacting



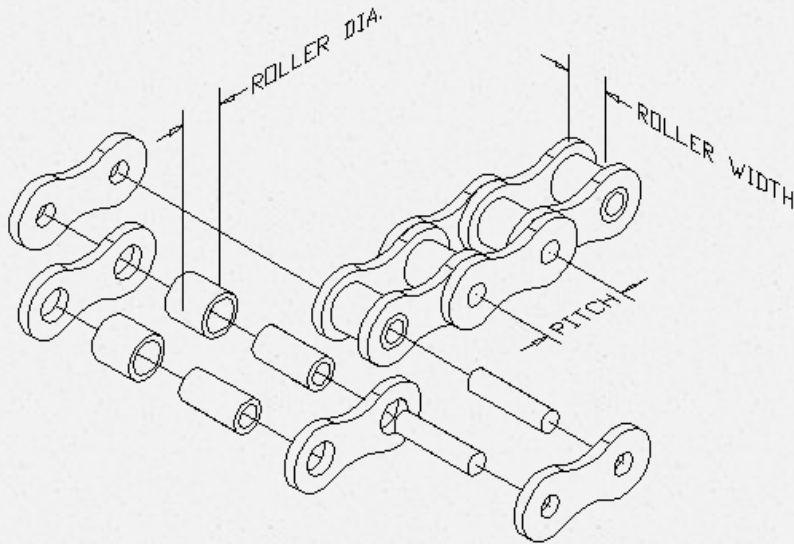
# Decision Model



# Implication


Why = What + Where + When + How

Alignment is very important!



# Dynamic Decisions

Theme	Selected options	Context	Expected outcome: costs/benefits
Why	Free-up resources Reduced costs	Inability to employ in Sweden	Availability of developers ROI in 1-2 years
What	Product Alpha	54 developers in Sweden 46 developers in India Overhead of distributed work Experienced developers Complex product Immature product Limited documentation	Costs of documentation
Where	India	Some experience exists Insufficient existing resources	Fast learning curve New employment Training
When	Middle of a release		Overload of existing staff Decrease in scope of delivery
How	Full transfer		Transfer costs Cost for after-transfer support

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# Conclusions

- Deliberate analysis of factors that influence the outcome of the decision is required
- Particular decision points can be interrelated and thus it is essential to aligned the *what*, *where*, *when*, *how* to the *why*
- Companies shall not lock themselves early in the decision process

# Thank you for your attention Questions?

**Eiropas Sociālā fonda projekts**  
**“Datorzinātnes pielietojumi un tās saiknes ar kvantu fiziku”**  
**Nr.2009/0216/1DP/1.1.1.2.0/09/APIA/044**



**IEGULDĪJUMS TAVĀ NĀKOTNĒ**