

ICGSE 2007

Successful Offshore Software Development

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Agenda

Successful Offshore Software Development

- **Motivation**
- **Goal & Process**
- **Successful Offshore Software Development**
 - Causes and weaknesses
 - Success factors
- **Conclusion**

In theory, offshore software development promises cost advantages of up to 40 %

Motivation

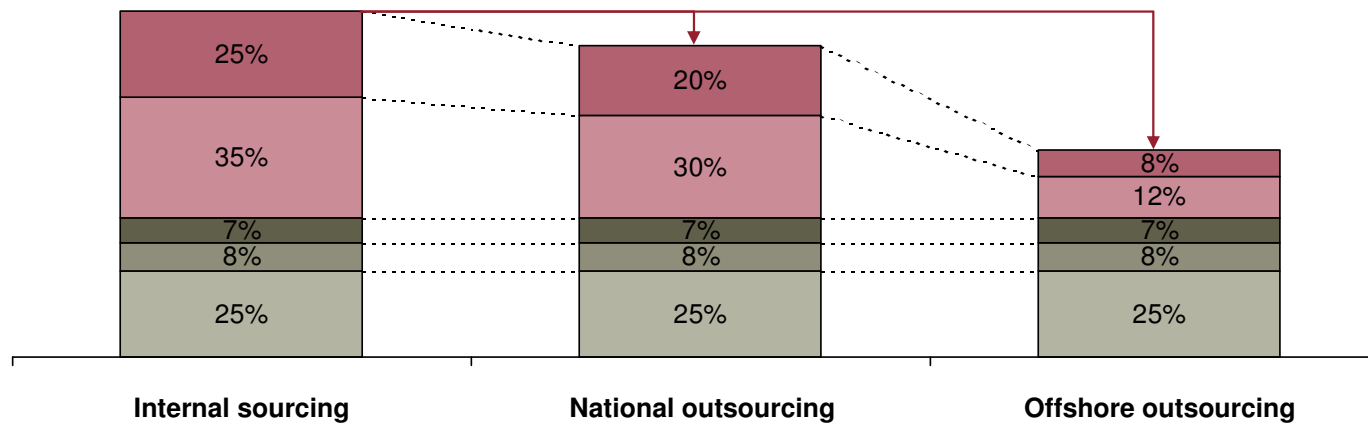
- Economies of scale
- Wage structures






-10%

- Labor costs

-40%

**ILLUSTRATIVE
EXAMPLE**

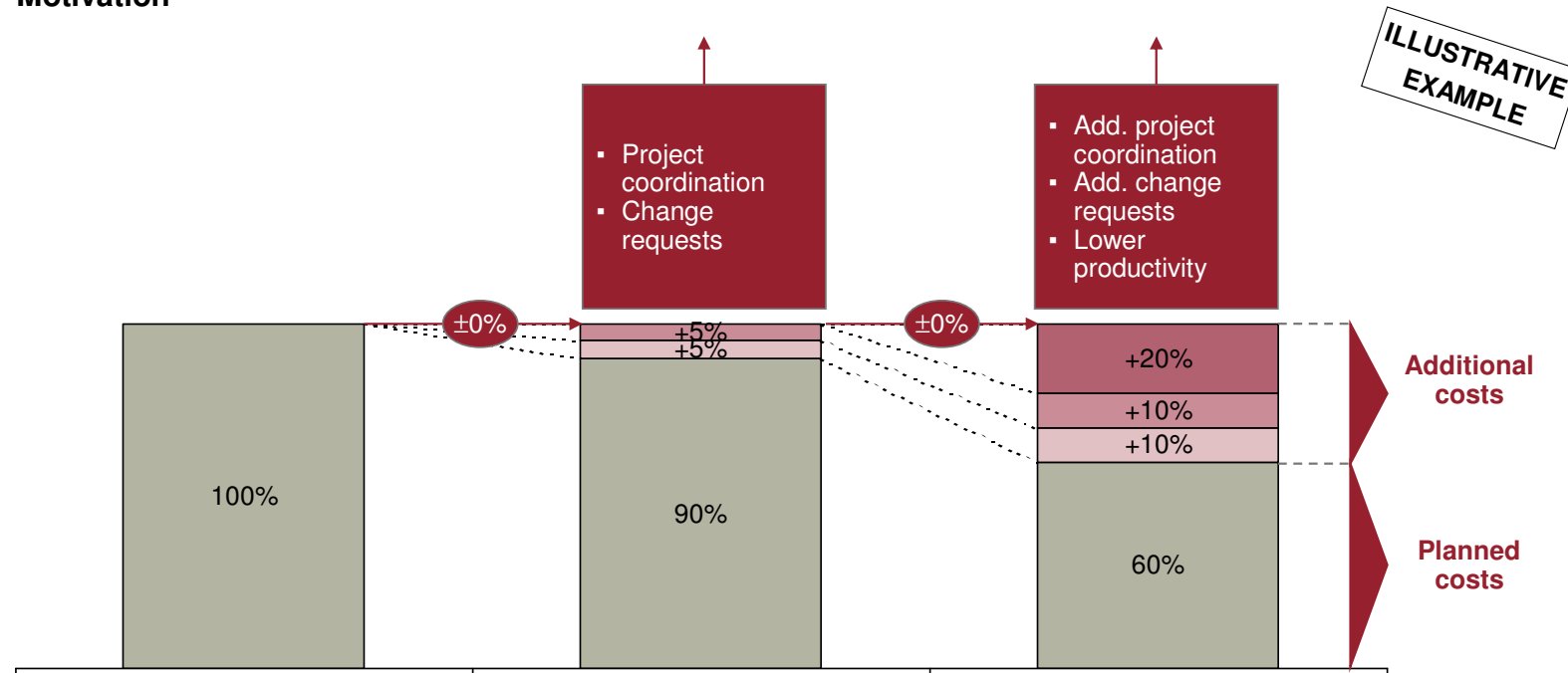


 = Analysis
  = Design
  = Project management
  = Coding
  = Testing

Sources: Beeler (2004), Lamberti (2004), Moczadlo (2002), Wiener (2006a)

However, higher coordination efforts, change requests and lower productivity often undo the aimed cost advantages in practice

Motivation



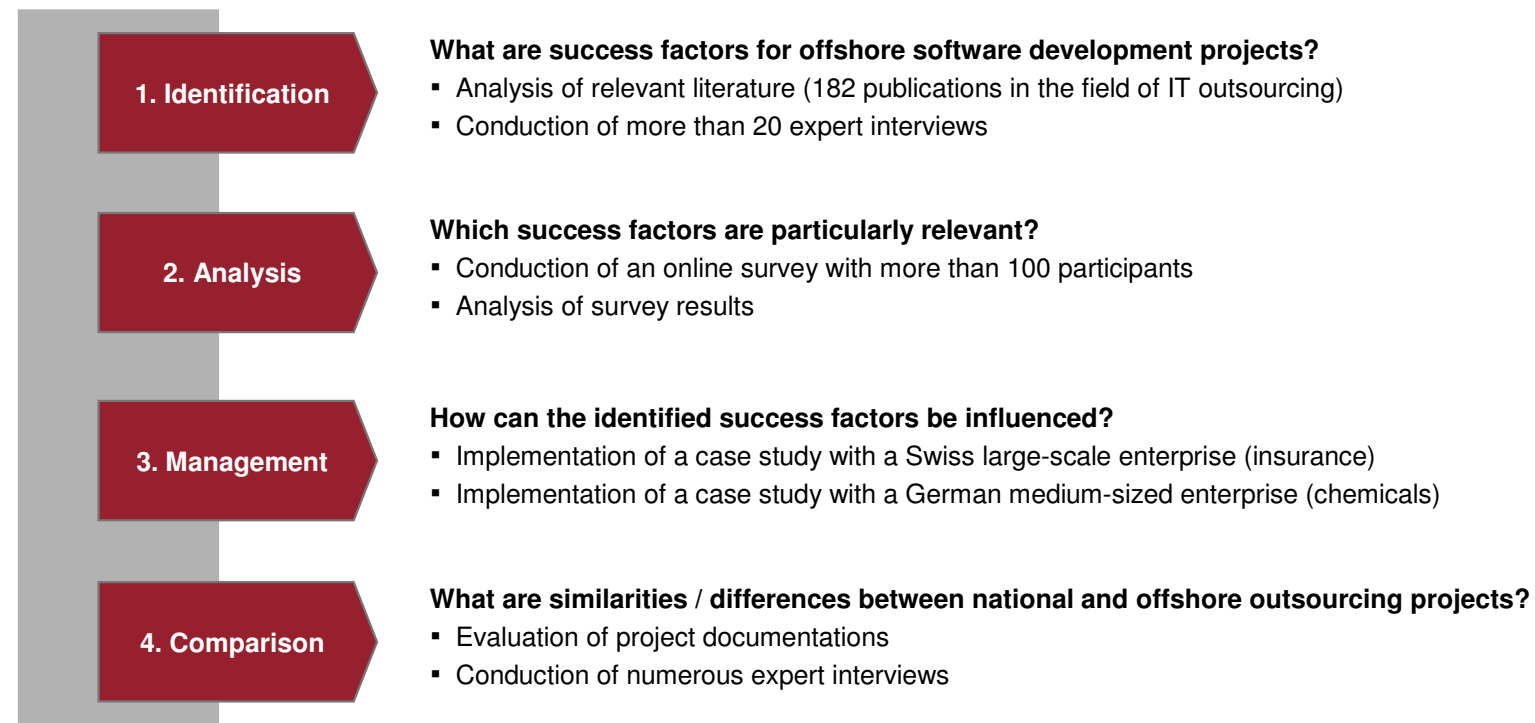
Internal sourcing National outsourcing Offshore outsourcing

■ = Cost base ■ = Costs for change requests ■ = Costs for project coordination ■ = Costs for lower productivity

Sources: Schaaf and Weber (2005), Overby (2003), Wiener (2006b)

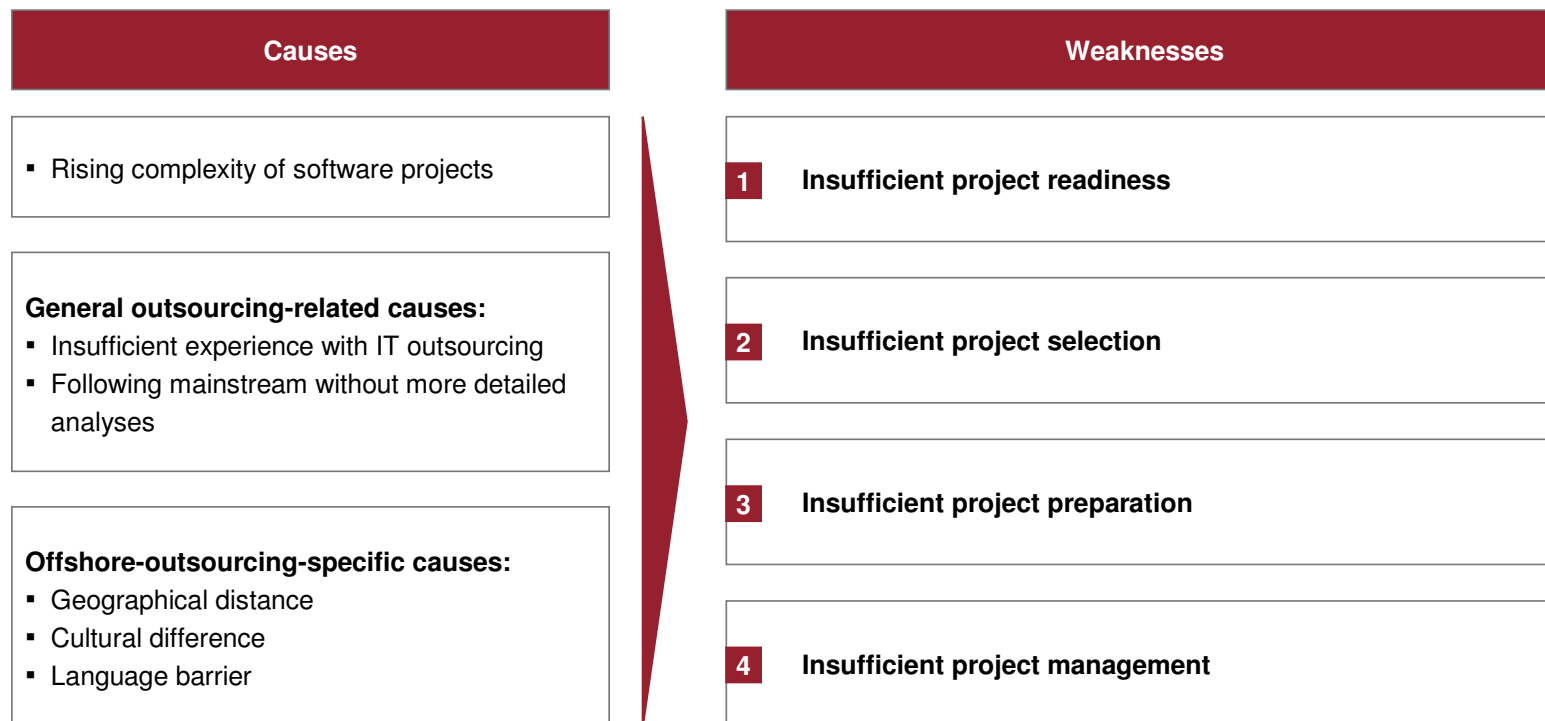
The goal is to establish a better understanding of how to manage offshore software development projects successfully

Goal & Process



Geographical, cultural and linguistical differences enforce classical weaknesses of software as well as outsourcing projects

Causes and weaknesses



Sources: Adalakun and Jennex (2003), Wiener (2006a), Wiener (2006b)

- insufficient project readiness
- insufficient project execution
- insufficient project preparation
- insufficient project management

Standardized processes and tools are preconditions for successful offshore software development

Success factors – Project readiness

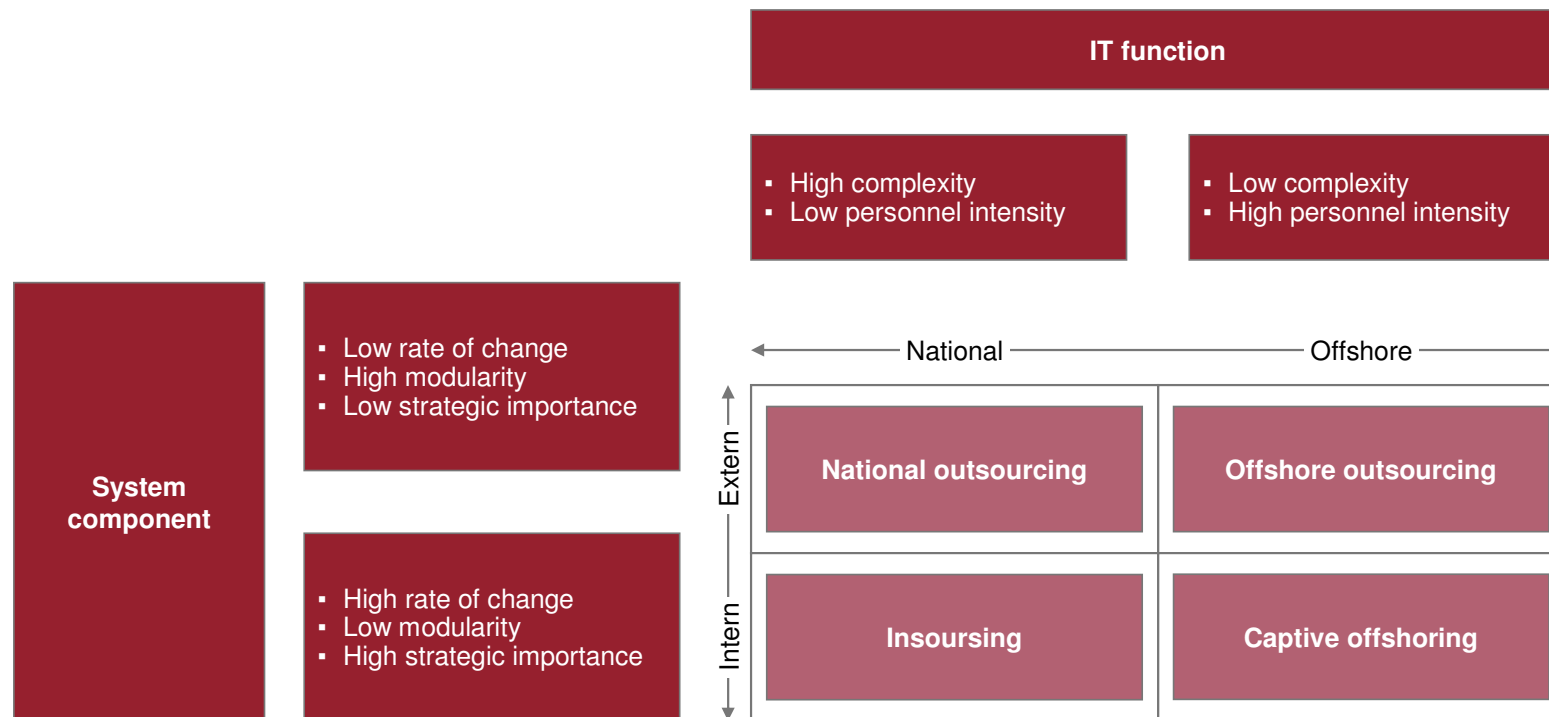
	Organization	Management	Employee	Process	IT
Preconditions for successful national outsourcing	<ul style="list-style-type: none"> ▪ Defined core competences ▪ Efficient internal organization structure ▪ Expertise in legal affairs etc. 	<ul style="list-style-type: none"> ▪ Sustained top management support ▪ Defined sourcing strategy ▪ Strategic partner(s) etc. 	<ul style="list-style-type: none"> ▪ „Managing“ competence ▪ Technical know-how ▪ Experience with distributed development projects etc. 	<ul style="list-style-type: none"> ▪ Defined and standardized processes ▪ Programming guidelines ▪ Specification/ documentation templates etc. 	<ul style="list-style-type: none"> ▪ Multi-site capable tools ▪ Comprehensive security infrastructure ▪ Video conferencing equipment etc.
Additional preconditions for successful offshore outsourcing	<ul style="list-style-type: none"> ▪ International corporate culture ▪ Expertise in international legal affairs etc. 	<ul style="list-style-type: none"> ▪ Experience with international projects ▪ Strategic offshore partner(s) etc. 	<ul style="list-style-type: none"> ▪ Experience with foreign cultures ▪ Good language skills in English etc. 	<ul style="list-style-type: none"> ▪ Conformity with CMM standard ▪ Process documentation in English etc. 	<ul style="list-style-type: none"> ▪ Use of standard tools and platforms ▪ Use of tools in English etc.

Source: Wiener (2006a)

- Insufficient project readiness
- Insufficient project execution
- Insufficient project preparation
- Inadequate project management

The selection of the suitable sourcing form depends on project-specific characteristics

Success factors – Project selection






Sources: Wiener (2006a), Wiener (2006b), THERON

- insufficient project readiness
- insufficient project execution
- insufficient project preparation
- insufficient project management

Early and pro-active internal change management is critical to success of an offshore software development project

Success factors – Project preparation

Success factor	Relevance for ...	
	... national outsourcing	... offshore outsourcing
▪ Define clear project goals and establish a common understanding of these goals		
▪ Develop a comprehensive business case, including project benefits and risks		
▪ Select a suitable provider based on well-defined criteria		
▪ Compile a detailed project specification with support of the (selected) provider		
▪ Define project standards – templates, processes, project management and language		
▪ Manage internal change pro-active and early		
▪ Create a sensibility among internal employees for the (foreign) culture		

 = not important
  = quite important
  = important
  = very important
  = critical

Sources: Wiener (2006a), THERON

Well-defined controlling and communication processes are key to success of an offshore software development project

Success factors – Project implementation

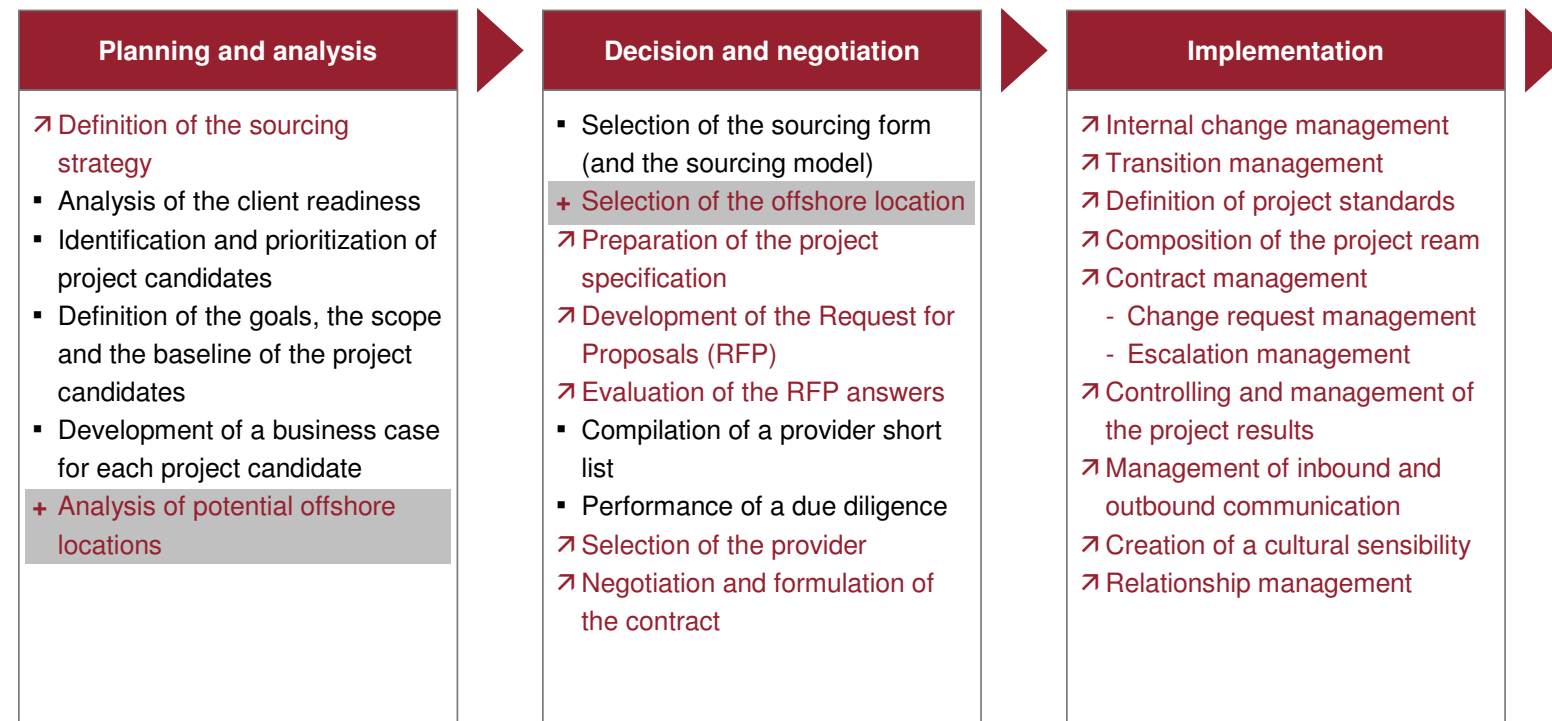
Success factor	Relevance for ...	
	... national outsourcing	... offshore outsourcing
▪ Define a project-specific and detailed contract with well-defined deliverables	●	⊕
▪ Compose a diverse project team with a multi-cultural project manager	⊙	●
▪ Establish a suitable IT infrastructure, particularly a common development environment	◐	⊕
▪ Ensure a bilateral know-how transfer	⊕	●
▪ Control the project progress and quality continuously and standardized	⊙	●
▪ Ensure a continuous communication flow by defining single points-of-contact	⊙	●
▪ Develop a partnership-like relationship (e. g., through framework contracts and risk sharing)	◐	●

○ = not important ⊙ = quite important ◐ = important ⊕ = very important ● = critical

Sources: Wiener (2006a), THERON

An offshore software development project requires a considerably higher management effort than a national software outsourcing project (1)

Conclusion



↗ = Increased effort in offshore projects + = Additional effort in offshore projects

Sources: Wiener (2006a), THERON

An offshore software development project requires a considerably higher management effort than a national software outsourcing project (2)

Conclusion

Strengths

1 Maturity and internationality of the client organization as well as transparency and standardization of the IT

2 Selection of suitable software components and IT functions

3 Scheduling and performance of a considerably higher preparation and coordination effort

4 Adjustment of internal controlling, communication and development processes

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