



Preparation for Software Outsourcing and Offshoring

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Objectives

This module will enable the participant to:

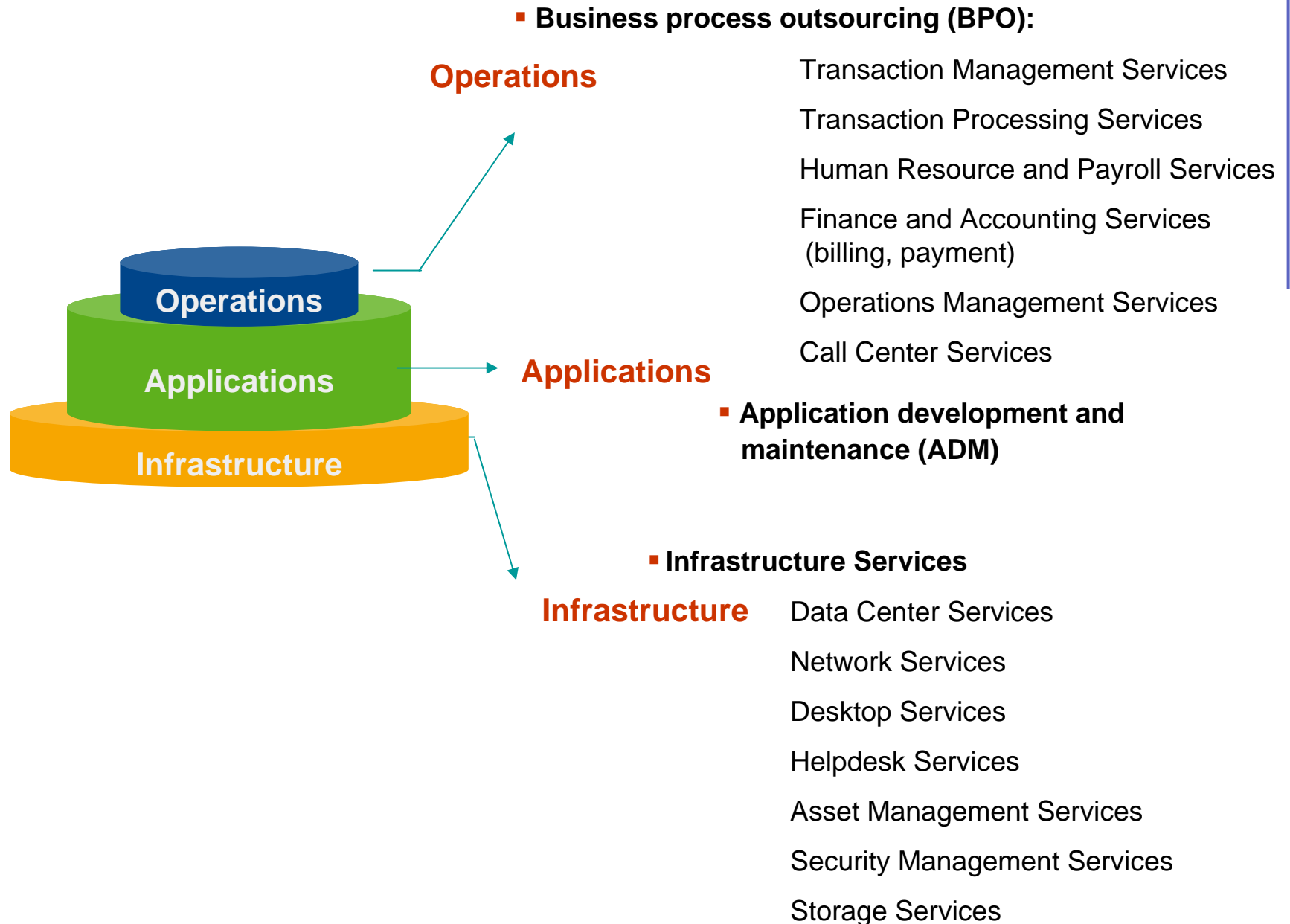
Prepare a decision basis for software outsourcing and offshoring.

Content

- Categories for Software Outsourcing
- Strategy for Outsourcing
- Gartner Cost Model for Software Outsourcing

- Summary

IT Outsourcing Categories (Gartner)



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Analysis of Business

- What Business are you in? What are the drivers?
- What is your differentiator?
- Which competence is key to your business?

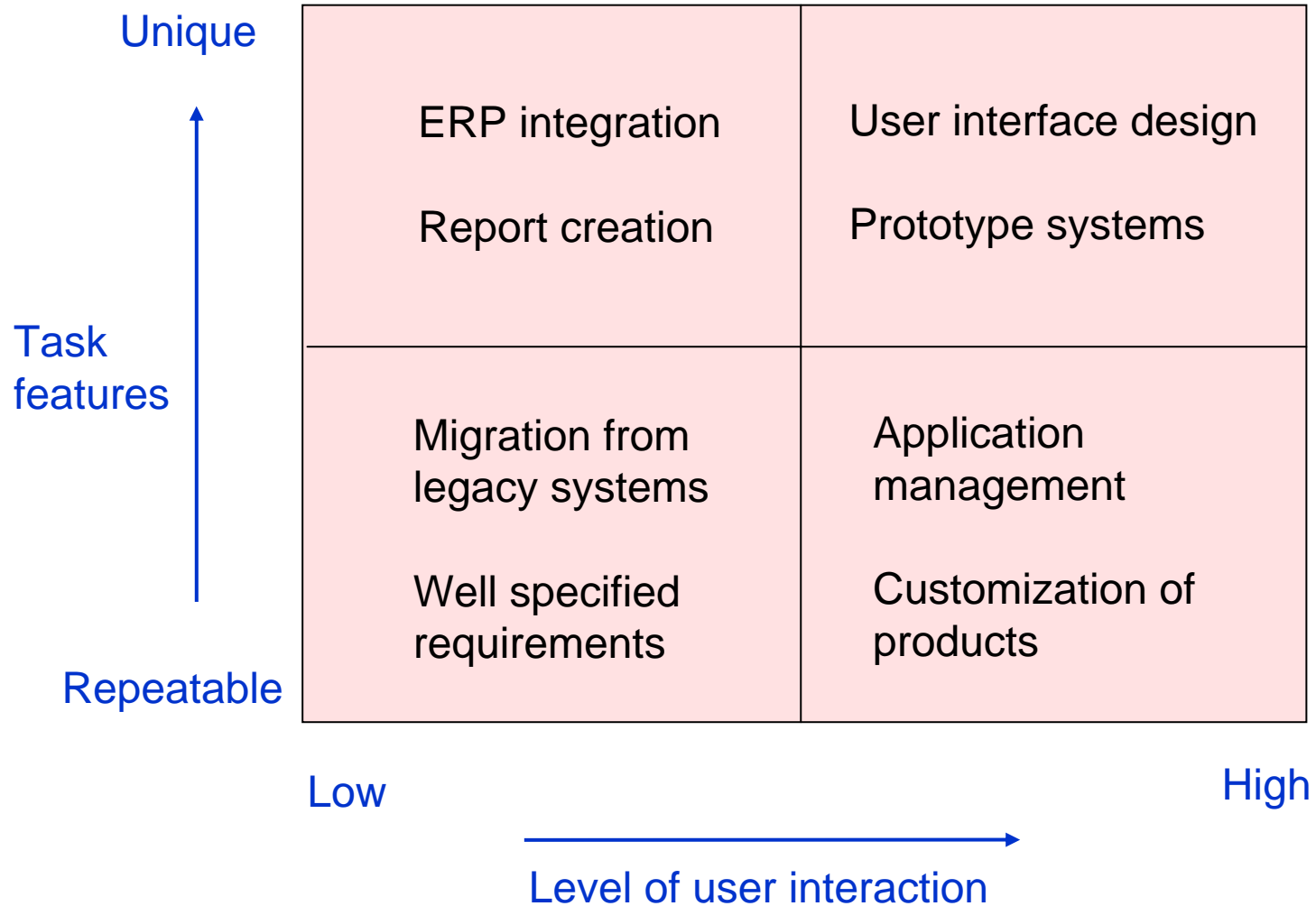
Strategic Approach to Application Outsourcing

- Application outsourcing strategies
 - Technical issues
 - Improve service levels to end users
 - Access to critical technical skills and resources
 - Upgrade applications quality, processes and methods
 - Business issues
 - Reduce cost
 - Ensure scalability of resources to business needs
 - Focus on core business

- Medium size enterprises act more tactical than large enterprises:
 - 40 % seek intermediate results/benefits through outsourcing (compared to 30% in large enterprises)
 - 60 % look for long-term payback (compared to 70% in large enterprises)

Source:
Gartner, 2003

Identify Candidates for Software Outsourcing



Application Outsourcing Inhibitors

Source:

Gartner, 2003

- Top three inhibitors to outsource
 - High costs associated with outsourcing
 - Security issues
 - Cost savings not realized

- Top fear
 - Loss of control and cost guarantees

- Other things to consider
 - Cultural differences, language
 - Geopolitical and social instability
 - Intellectual property protection
 - Loss of technical expertise and business knowledge

Vendor Selection

■ Identification of Outsourcing Candidates

- Recommendations 63%
- Past direct relationships 57%
- Presence at industry conferences 40%

■ Vendor Selection Criteria

- Quality and Cost

■ Decision makers

- Medium size enterprises: IT Managers
- Large enterprises: group of CIO, IT manager, BU manager, procurement officer

Source:

Gartner, 2003

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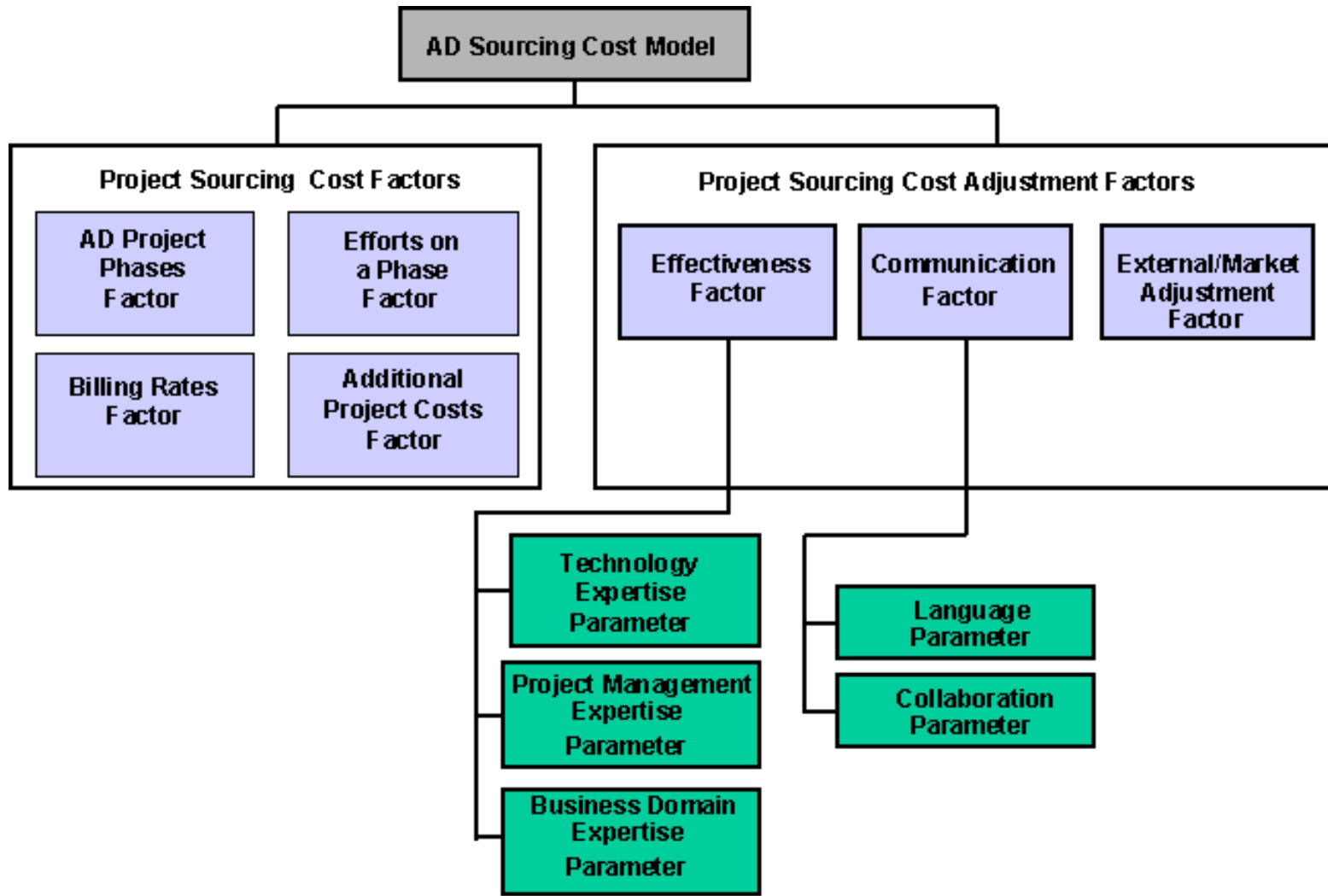
The Application Development Outsourcing Cost Model

- Typical questions when searching best resources for a project:
 - Should the enterprise use its own staff or the staff of an external service provider (ESP)?
 - Should the staff be located on-site (co-located with the enterprise users), off-site (in the same country) or offshore?
 - If offshore, in what countries?

The Application Development Outsourcing Cost Model

- In search of cost-efficiency of software sourcing, you need to answer to the following questions:
 - Why shouldn't they simply select the ESPs with the **lowest billing rates**?
 - Do off-site/offshore development realities, like
 - **geographical distances**,
 - **time-zone** differences
 - electronic, rather than face-to-face **communication** —complicate and, thus, result in less-cost-effective **software** outsourcing? And if so, to what degree?
 - Can domestic ESPs successfully compete against foreign ESPs from countries with lower (often much lower) billing rates than are available in your western country?

Driving Inputs to the Application Development Outsourcing Cost Model



The Application Development Outsourcing Cost Model: Realistic Expectations

Saving Factors

■ Billing Rates as Saving Factor

(billing and cost of labor in units relative to 1.0):

- U.S. enterprise — 1.0 (reference)
- In-sourced — 1.0 (Indian ESP working in the U.S.)
- Offshore — 0.3 (Indian ESP support from India)

■ Effectiveness factor

(expertise in development, project management and business domain):

- U.S. enterprise — 0.46
- Average U.S. ESP — 0.74
- Offshore ESP — 0.70 (typical for most Indian ESP)

Additional Cost Factors

■ Communication factor

(complexity of conducting off-site / offshore development):

- U.S. enterprise — 0.95 (= or U.S. ESP in-sourced)
- U.S. ESP — 0.87 (U.S. ESP working off-site)
- Indian In-sourced — 0.78 (Indian ESP working in the U.S.)
- Offshore — 0.46 (Indian ESP supports from India)

Example:

	100%	60%	30%	30%	80%	100%	
On-site (% of phase's efforts)	100%	60%	30%	30%	80%	100%	
	Analysis	Design		Unit test		Deployment	
		Design	Construction	Unit test	System test		
Off-site (% of phase's efforts)	0%	40%	70%	70%	20%	0%	Totals
Staff (full-time equivalents)	6	8	7	5	6	5	37
Time (months)	2.5	4	7	4	3	3	23.5
Allocation of Efforts Across Phases (man-months = staff x time)	15	32	49	20	18	15	149
Allocation of Efforts Across Phases (%)	10%	21%	33%	13%	12%	10%	100%
Allocation of Off-Site Efforts Across Phases (man-months = efforts on a phase x off-site %)	0	12.8	34.3	14	3.6	0	64.7
Allocation of Off-Site Efforts Across Phases	0%	9%	23%	9%	2%	0%	43%
Allocation of On-Site Efforts Across Phases (man-months = efforts on a phase x on-site %)	15	19.2	14.7	6	14.4	15	84.3
Allocation of On-Site Efforts Across Phases	10%	13%	10%	4%	10%	10%	57%

Adjustment Factors Used in the Project Example

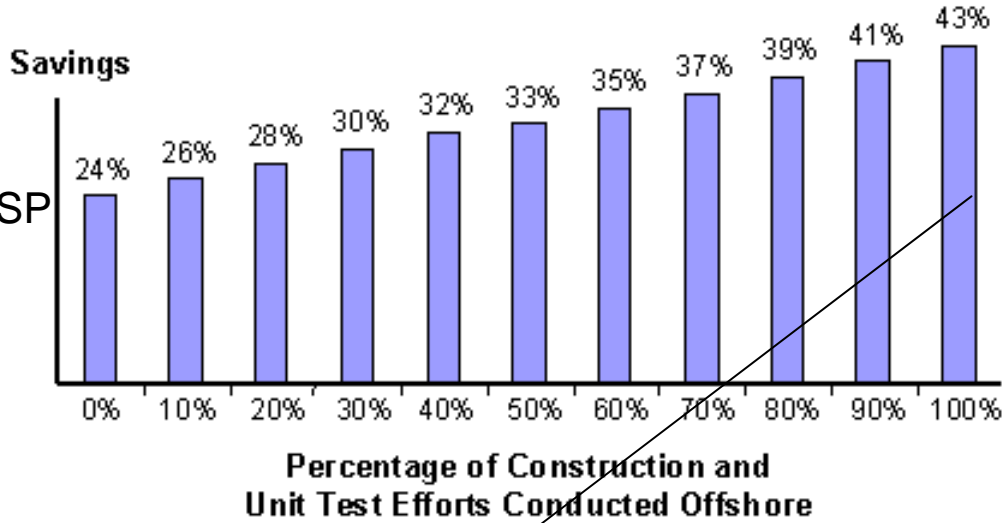
Choices for the Off-Site Part of Project:

U.S. enterprise (reference)		Indian ESP on-site	Indian ESP off-site
■ Billing rates	— 1.0	— 0.95	— 0.3
■ Effectiveness factor	— 0.46	— 0.70	— 0.70
■ Communic. factor	— 0.95	— 0.78	— 0.46

- Calculated Savings = Difference between cost of ESP and U.S. enterprise for executing the same project part.

The Realistic Picture of Savings

$$\text{Savings} = \text{Cost of AD by ESP} - \text{Cost of AD by Enterprise}$$



Project part fully executed off-site by an Indian ESP

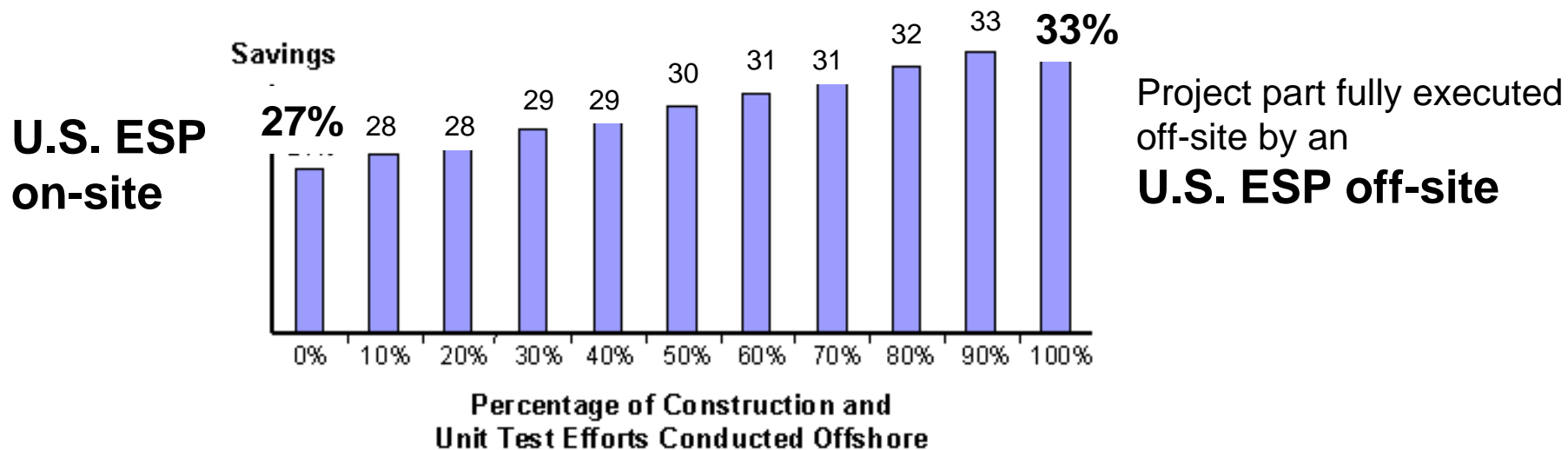
Cost of the project if executed by an enterprise	Savings if executed by an offshore ESP	Cost of the project if executed by an ESP	Project cost ratio = cost if executed by an enterprise/ cost if executed by an ESP	Cost of labor ratio = enterprise's fully loaded cost of labor/ESP developer's offshore billing rate
100 percent	43 percent	100 percent - 43 percent = 57 percent	100 percent/57 = 1.75 times less expensive to execute with an ESP than to develop on its own	ESP's offshore billing rate is three times lower than a U.S. developer's fully loaded cost of labor

Comparison of Using an U.S. ESP

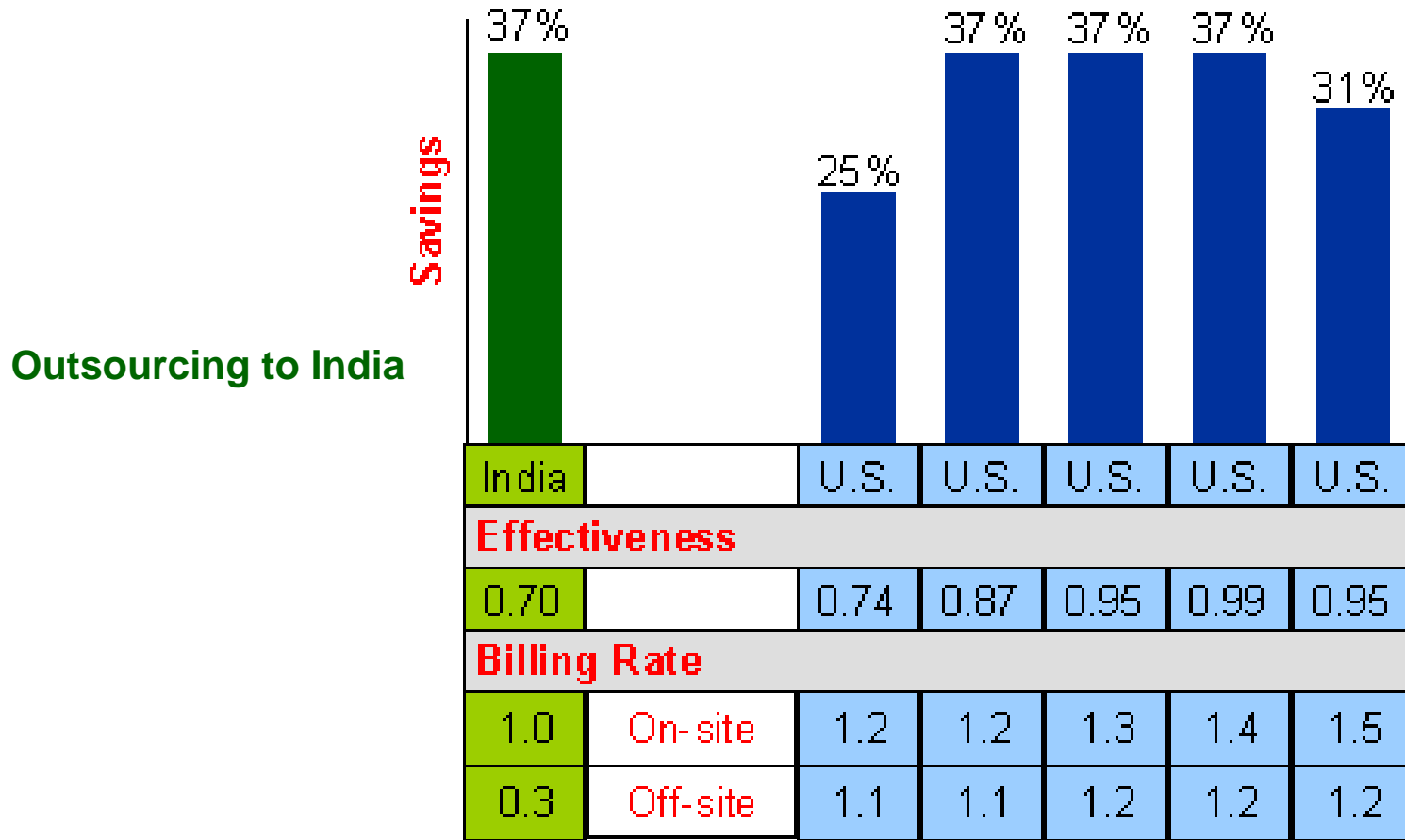
Choices for the Off-Site Part of Project:

U.S. enterprise (reference)		U.S. ESP on-site	U.S. ESP off-site
■ Billing rates	— 1.0	— 1.2	— 0.9
■ Effectiveness factor	— 0.46	— 0.74	— 0.74
■ Communic. factor	— 0.95	— 0.95	— 0.87

Savings = Cost of AD by ESP – Cost of AD by Enterprise



How Effectiveness Compensates for High Billing Rates



Increased effectiveness in western countries can outrange cheap labor cost in India

Outsourcing within the U.S.

How to Become More Effective?

■ Technical Improvements

- IT education – increase percentage of developers with formal IT education
- Software certification – have certified developers, e.g. in Microsoft technologies, Java, ...
- IT training – systematically train your people to keep them up to date

■ Process Improvement

- Follow the (software) process improvement models (CMMI, Spice, ...)

■ Management Improvement

- Project leader training
- Introduction and certification of new roles: configuration manager, quality manager