



IBM Software Group

# Global Development and Delivery



Rational software



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## Distributed Development *should* be

... a global, Web-enabled playing field that allows for multiple forms of collaboration --- the sharing of knowledge and work --- in real time, without regard to geography, distance, or, in the near future, even language. It is... this new global playing field for multiple forms of collaboration.

**-Thomas Friedman**  
*The World is Flat*

# Distributed Development Categories

## Geographic Distribution

- Buildings
- States
- Countries
- Continents

## Global Distribution

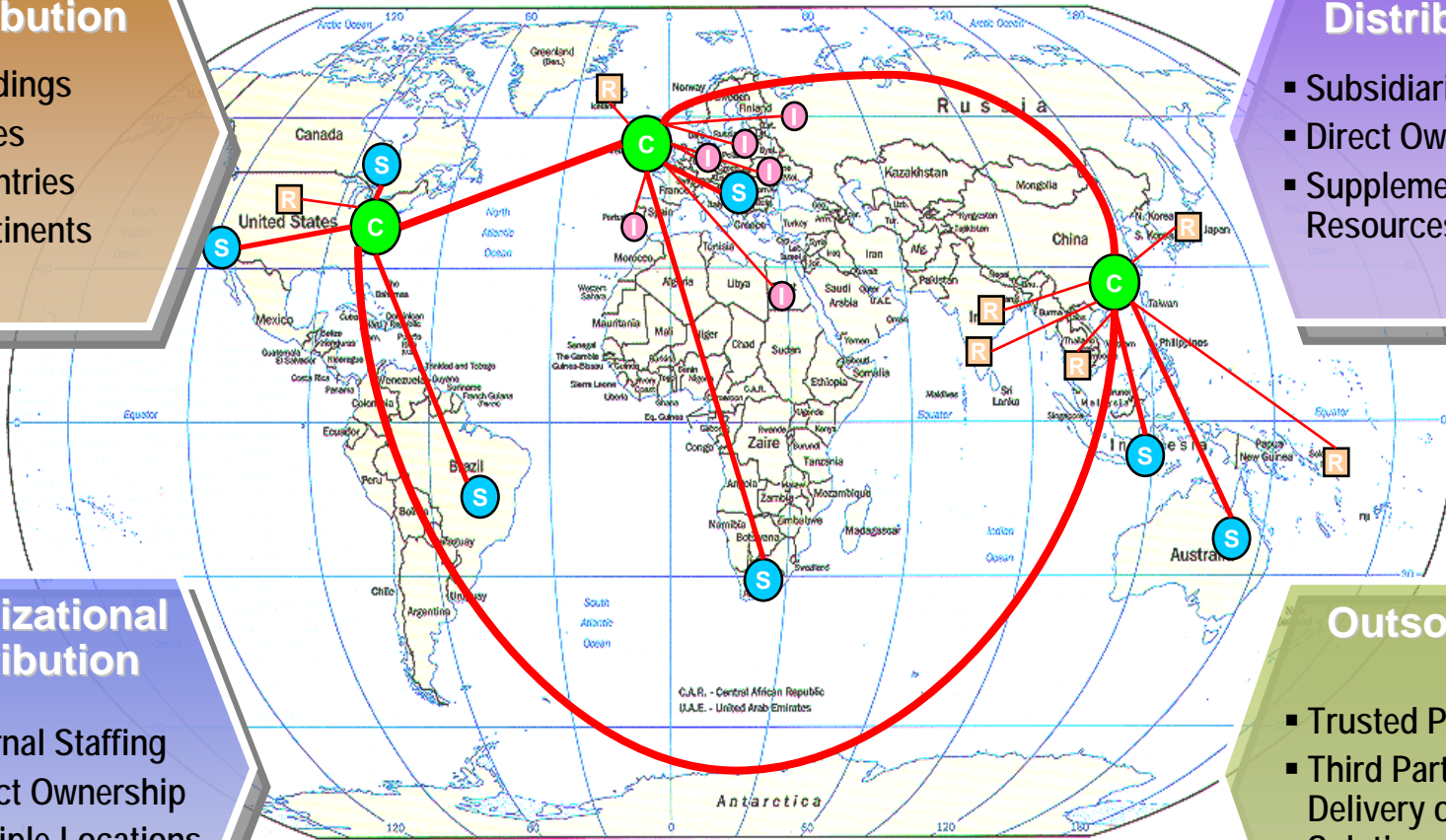
- Subsidiaries
- Direct Ownership
- Supplemental Resources

## Organizational Distribution

- Internal Staffing
- Direct Ownership
- Multiple Locations

## Outsourced

- Trusted Partner
- Third Party Delivery of Whole Solution



# Agenda

**1**

**Bait and Switch? Real Costs of GDD**

**2**

**GDD Common Pitfalls**

**3**

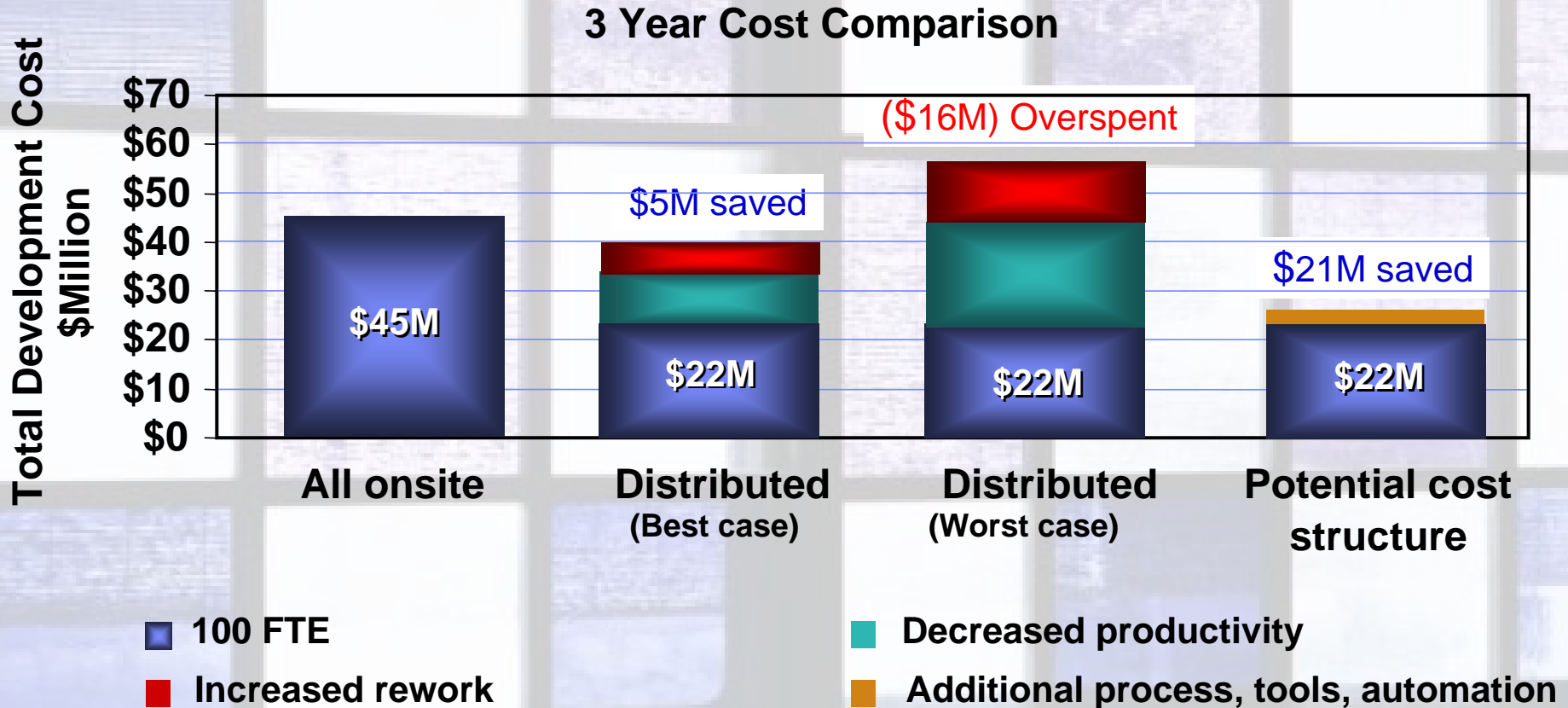
**Thriving with Global Development**

**4**

**The State of Your State**



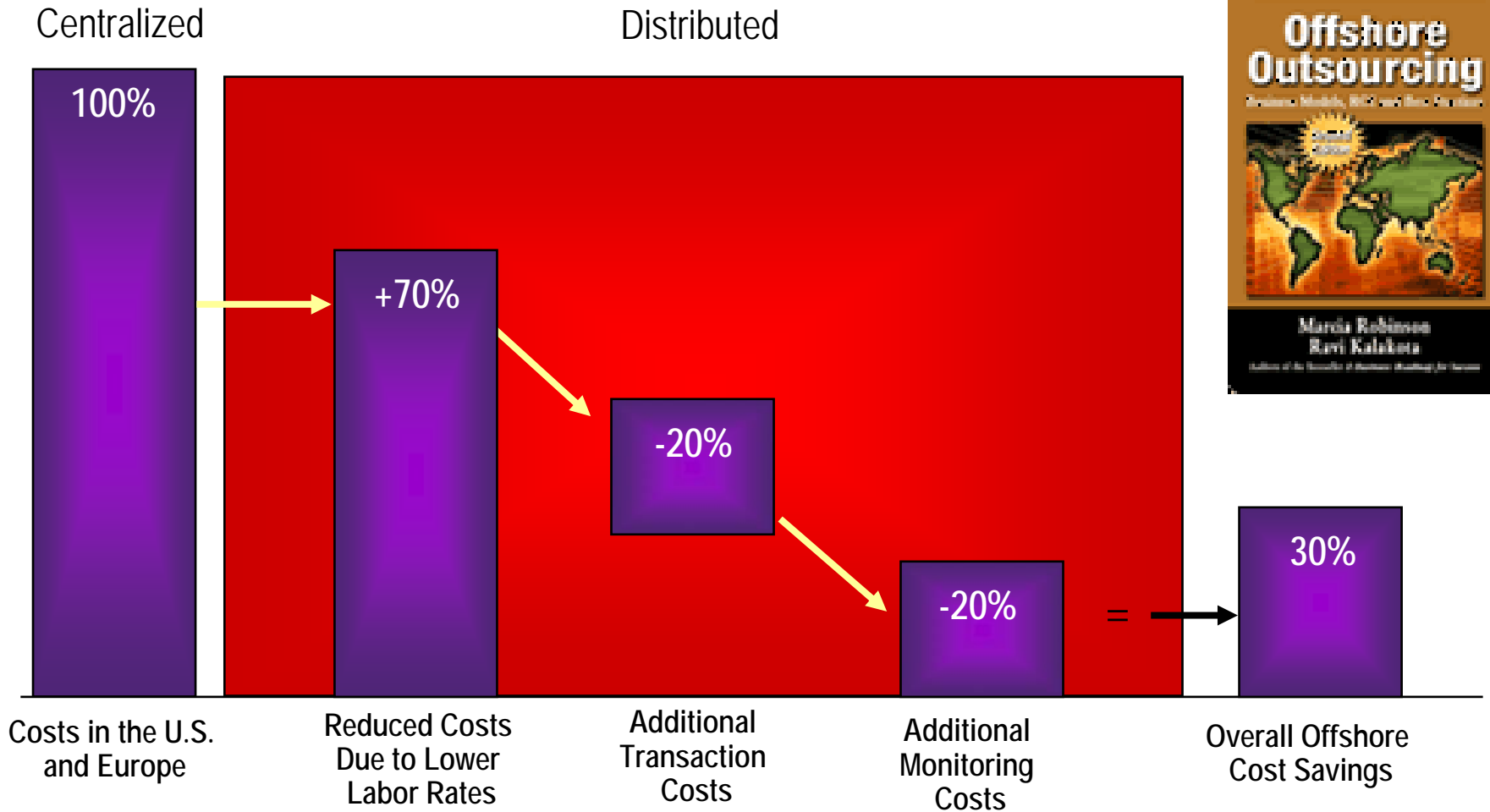
# Distributed Development – Unadvertised Costs



Note: This cost analysis is based on IBM/Rational customer experience.



# The Economics of Offshore Development



"Offshore Outsourcing – Business Models, ROI and Best Practices" Marcia Robinson & Ravi Kalakota



# The Hidden Costs

## Productivity

- Poor Requirements
- Cultural Concerns
- Time Zones Trade-offs
- Additional Project Management
- Mismatched SCM
- Poor Hand-offs
- Multiple Deliveries

## Transactions

- Multiple Versions of Similar Products
- Legal / Vendor Selection
- Additional Servers and Administration
- High Speed Connections
- Conference Calls, Travel, Scrums

## Rework

- High Initial Defect Density
- Requirements Mismatch
- Poorly Defined Deliverables
- Wrong Versions Delivered
- Poor Strategic Knowledge

**Potential Productivity Decline of up to 50%, Transactional Increases of up to 20% and Rework Increases of 30-50%.**



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# Business Drivers Can Create Pitfalls

## **Business drivers**

- Acquisitions and mergers
- Increased flexibility to adapt quickly
- Budget cuts / cost reductions
- Skill shortage
- Variable staffing model
- Application backlogs
- Competitive edge with decreased time to market and low cost solution

## **Global Development & Delivery**

*Creates*

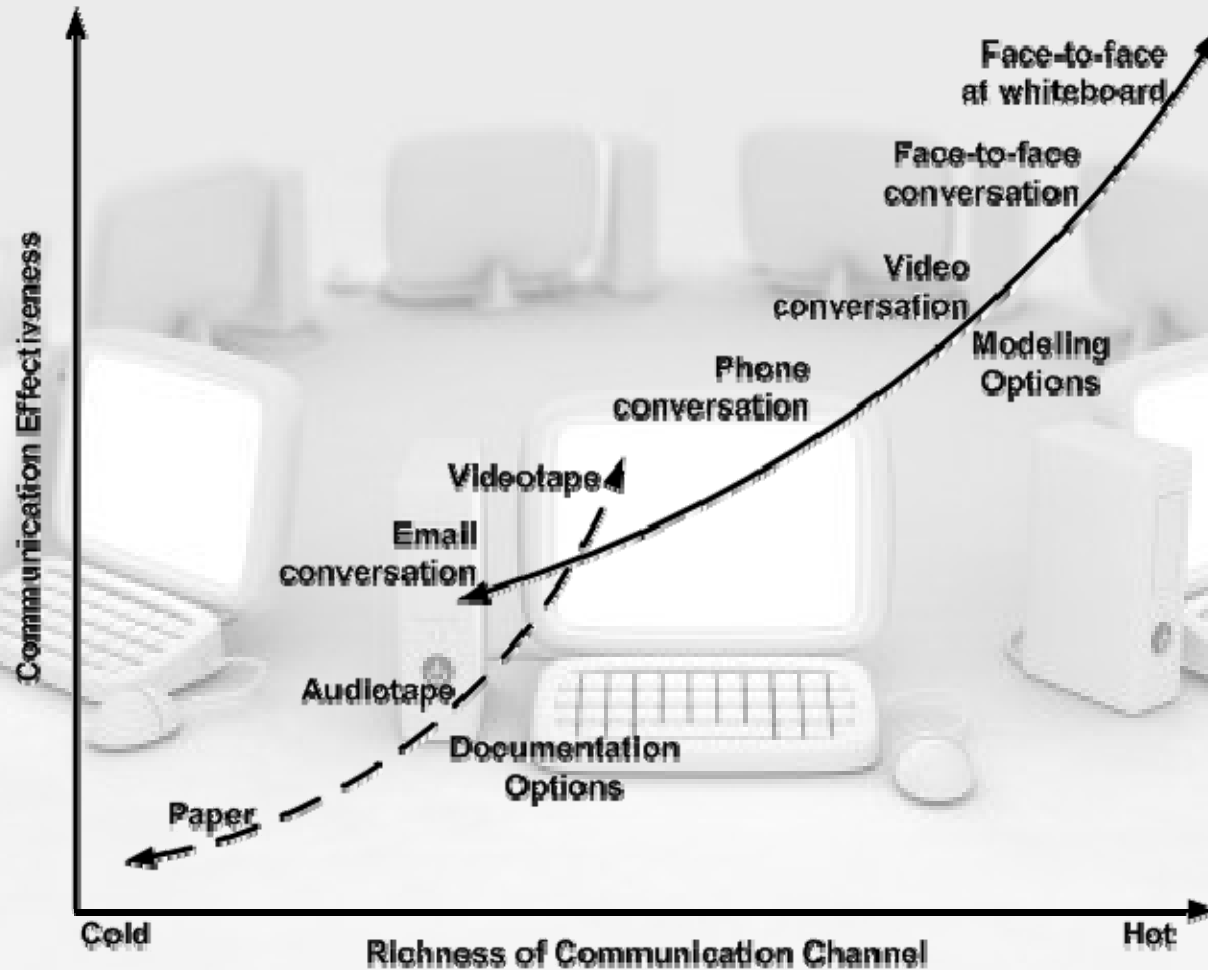
## **Pitfalls**

- Mismatched and misunderstood process
- Communication issues
- Cultural issues
- Decreased productivity
- Increased rework
- Mistakes in work-transfer
- Higher coordination costs
- Political issues
- Lack of security IP protection
- Lack of project visibility, agility and control
- Lack of project metrics – unable to measure success

*Gartner survey of 219 clients who outsourced projects offshore & domestically – half are expecting to fail to deliver anticipated savings*



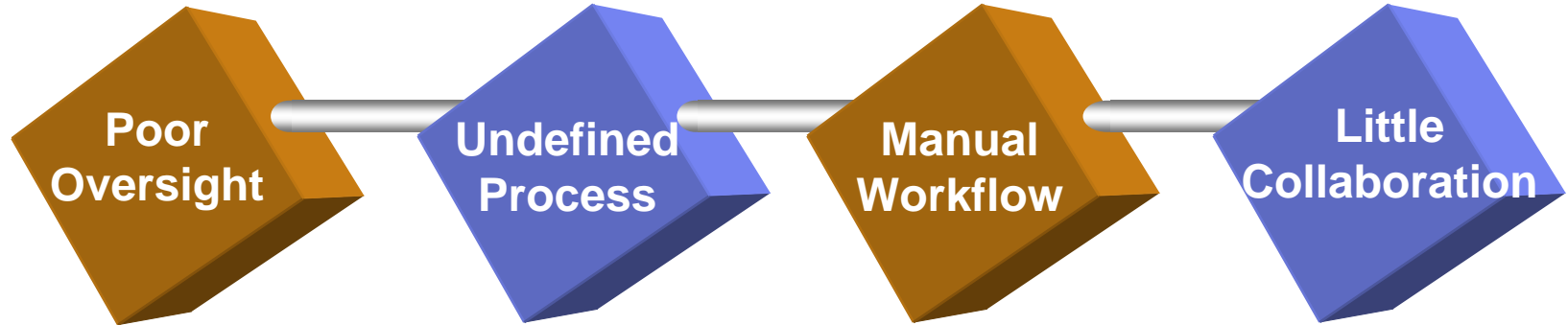
# Ensure Communication is Rich



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Original Diagram Copyright 2002 Alain Cockburn



# Most Common Pitfalls



## Symptoms

- No Stakeholder Buy-in
- Poor Project Ownership
- Ineffective Communication
- Inconsistent Metrics
- No ability to "see" across teams
- Inaccessible Information

## Symptoms

- No "Managed" Processes
- Lagging Documentation
- Missing Requirements
- No Feature Verification (in, out or new)
- Incomplete (or unknown) impact assessments
- Little activity on risk items

## Symptoms

- Little Automation
- Poorly Defined Roles
- Bad Hand-offs
- Long Build Times
- Ineffective Change Management
- No Understanding of Responsibilities

## Symptoms

- Unclear communications
- Continued time zone and cultural issues
- Poor notification throughout team
- No record of who owns or did what
- Different tools for similar jobs



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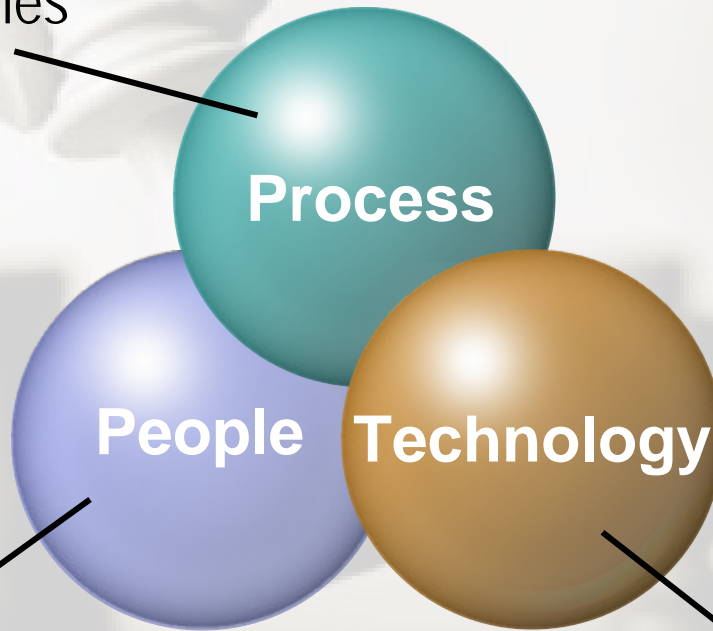
**3 Thriving with Global Development**

**4 The State of Your State**



# How Do **You** Thrive?

Identify & Manage Key  
Resource Dependencies  
& Interactions



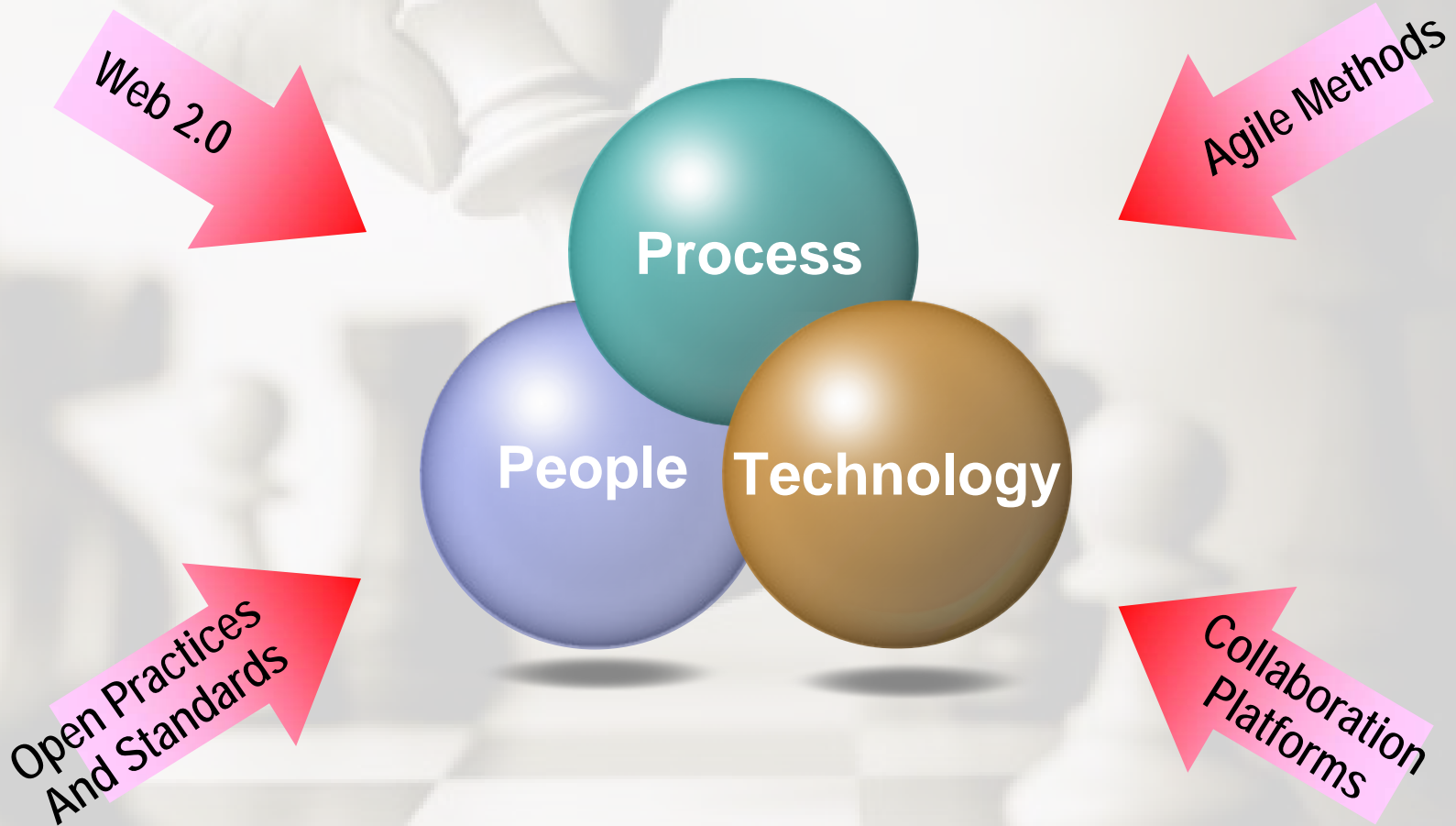
Standardize &  
Optimize  
Processes for  
Distributed  
Development

Use Tools Designed  
for the Unique  
Challenges of  
Distributed  
Development

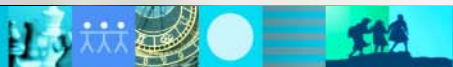
- **Henry Liang**, CSC LeadingEdge Forum  
*Distributed Software Development*



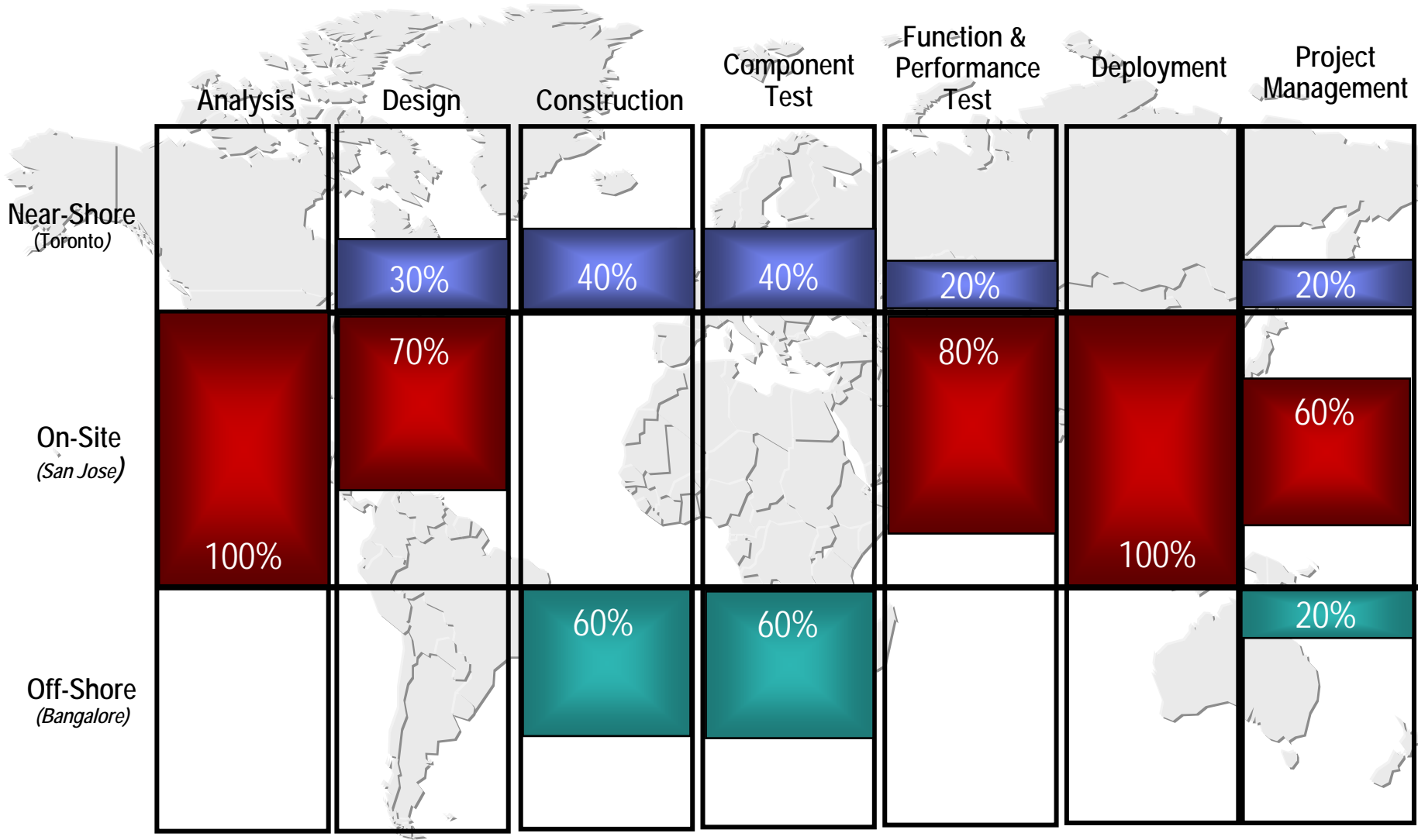
# Leverage Trends in Distributed Development



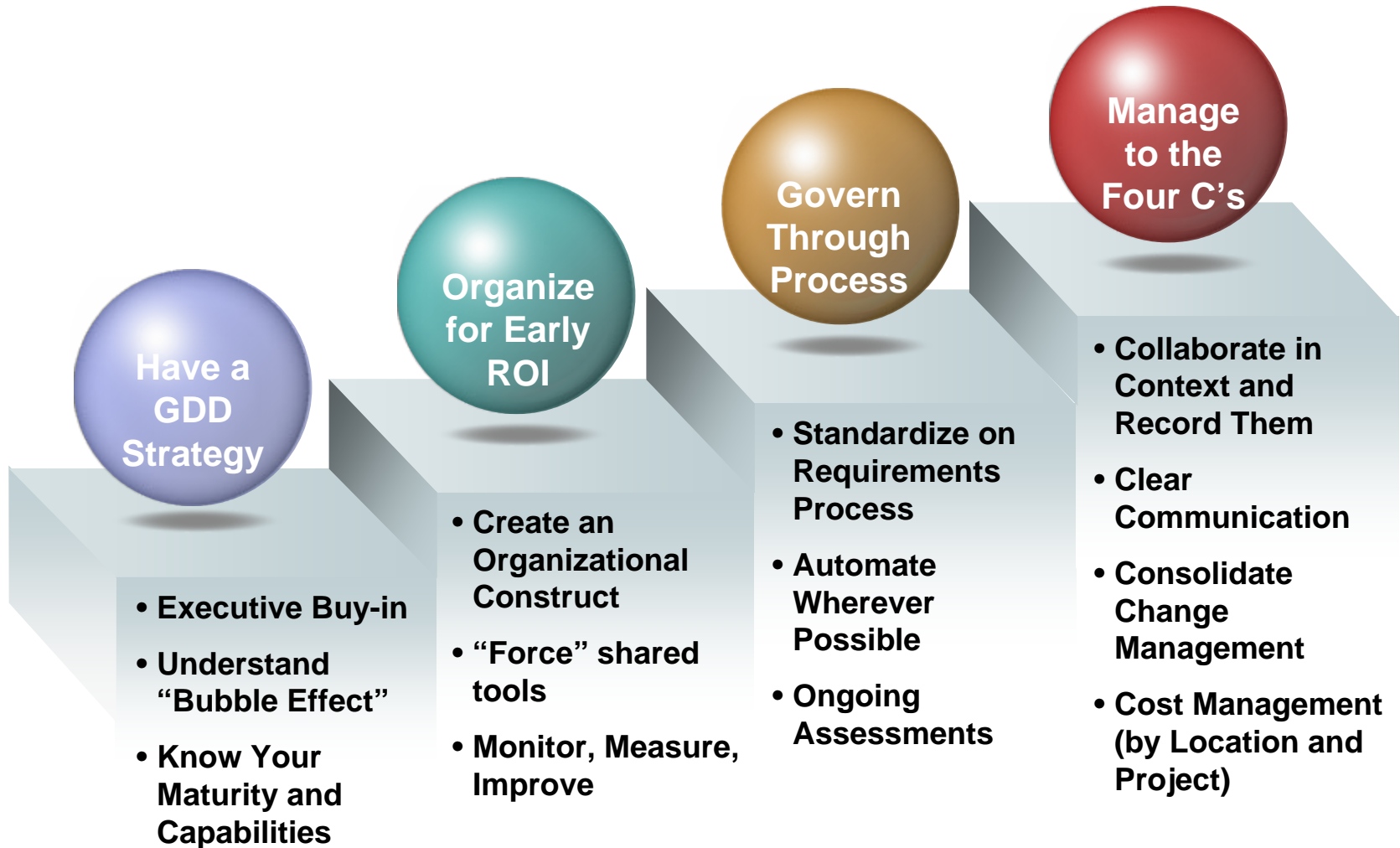
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# Map Your Geographic Segmentation & Discipline Allocation



# Best Practices for Distributed Development Success





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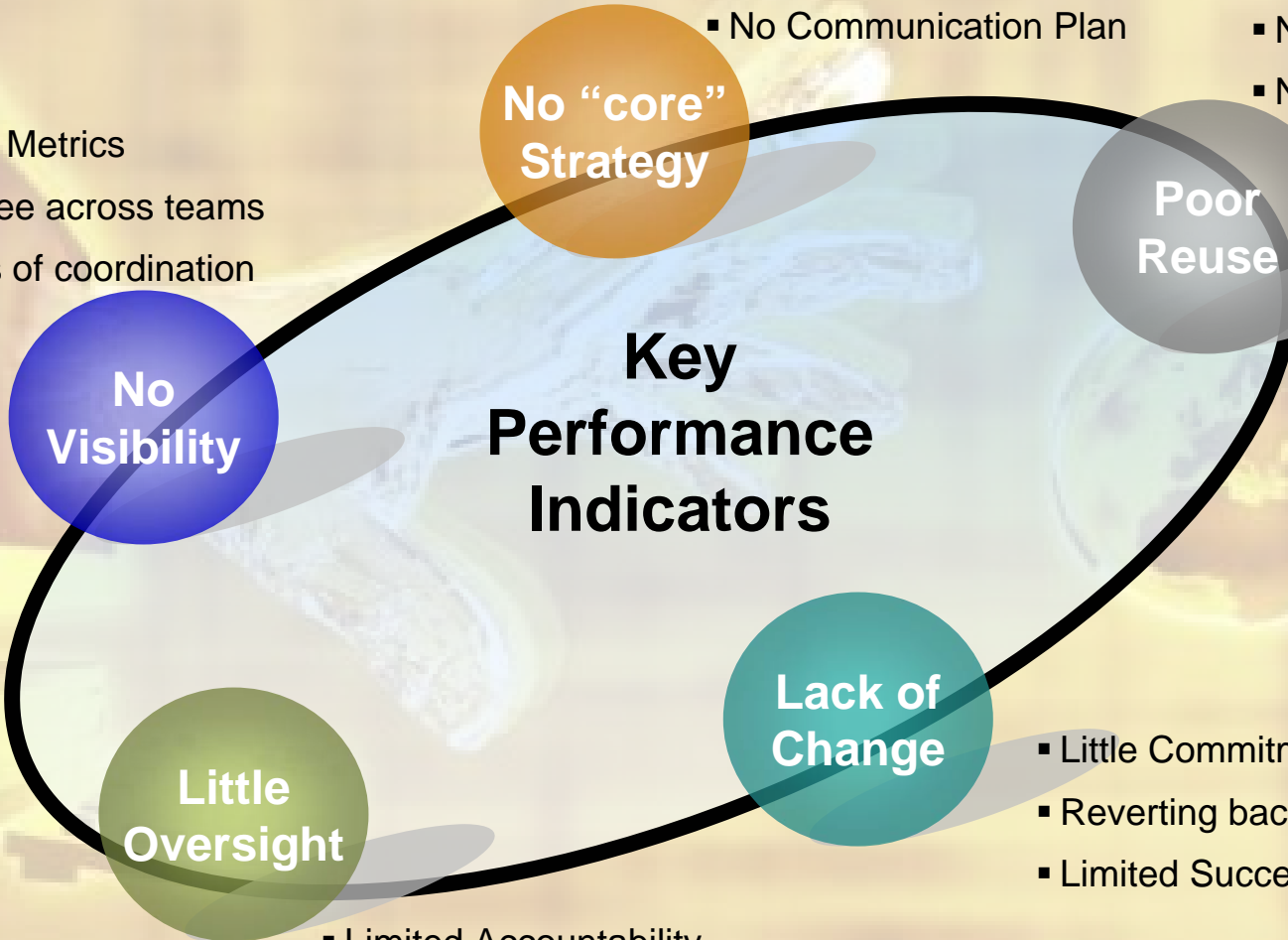
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# What Are You Seeing?

- Few Overall Metrics
- Inability to see across teams
- Mixed levels of coordination



- No Stakeholder consensus
- No Project Assessment
- No Communication Plan
- Growth of Libraries
- No Asset Ownership
- No usage metrics

**No Visibility**

**No "core" Strategy**

**Poor Reuse**

**Lack of Change**

**Little Oversight**

- Limited Accountability
- Inconsistent processes
- Automation not prevalent

- Little Commitment to Offshoring
- Reverting back to old model
- Limited Successes



# Measuring Your Distributed Development

## Establishment

## Encouragement

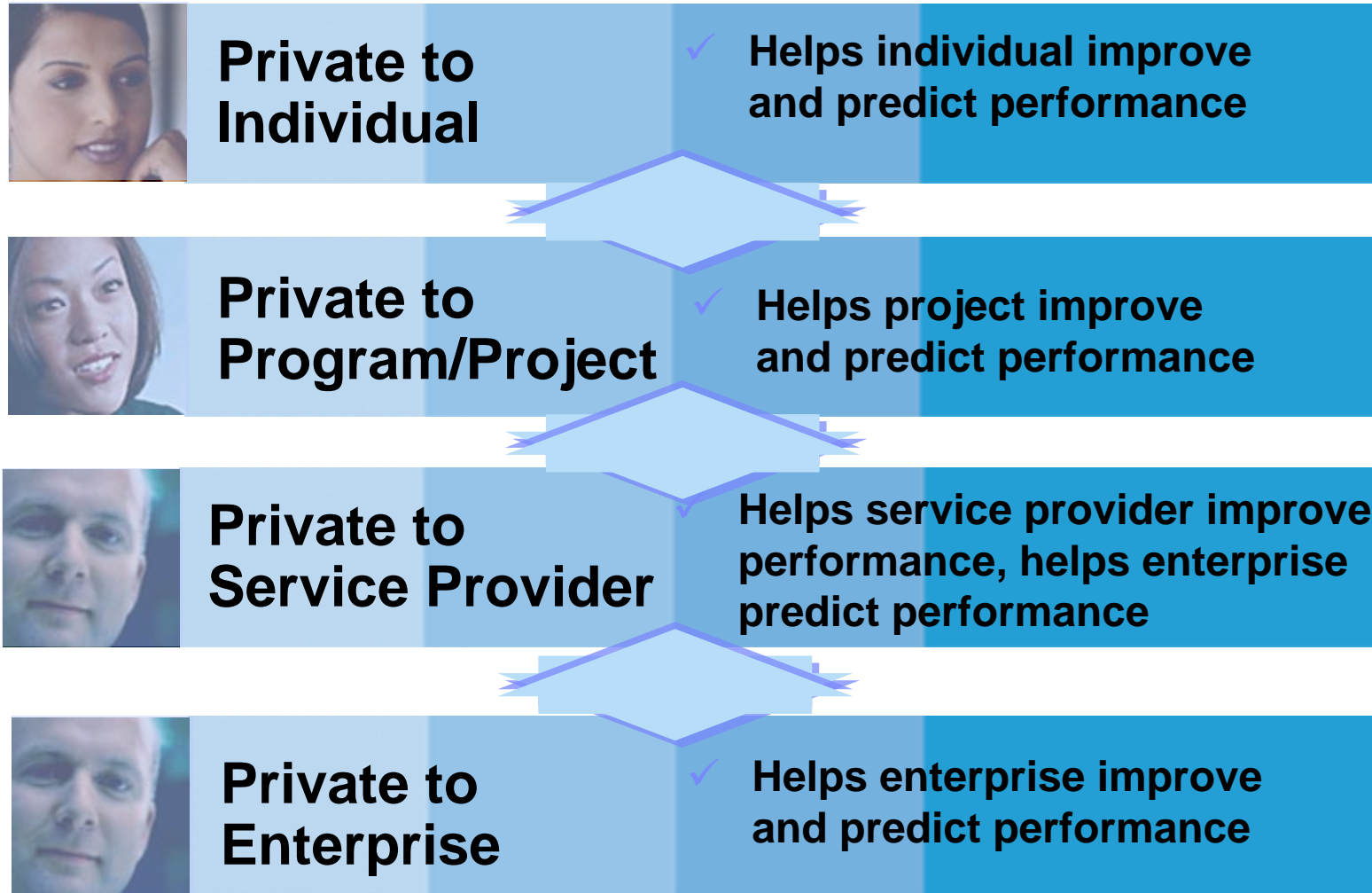
## Advancement

	Establishment	Encouragement	Advancement
Strategic Focus	<ul style="list-style-type: none"> <li>▪ Creating and Articulating offshore plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Driving broader and more consistent use of offshoring resources</li> </ul>	<ul style="list-style-type: none"> <li>▪ Leveraging new services like packaged app management and remote administration</li> </ul>
Internal Battles	<ul style="list-style-type: none"> <li>▪ Garnering business and IT support for offshore pilots</li> </ul>	<ul style="list-style-type: none"> <li>▪ Taking offshore mission-critical development and maintenance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Linking offshore efforts to cross-company process owners</li> </ul>
Processes	<ul style="list-style-type: none"> <li>▪ Identifying offshore opportunities/savings. Clarify development process</li> </ul>	<ul style="list-style-type: none"> <li>▪ Project management training and documenting processes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rolling out CMM- and CMMI-development methodology and certifying staff project management</li> </ul>
Human Resources	<ul style="list-style-type: none"> <li>▪ Communicating offshore strategy with delineation of job roles impacted by offshore</li> </ul>	<ul style="list-style-type: none"> <li>▪ Including offshore usage requirements in performance metrics for Senior IT staff</li> </ul>	<ul style="list-style-type: none"> <li>▪ Including CMMI and process adoption metrics in IT performance metrics</li> </ul>
Vendors	<ul style="list-style-type: none"> <li>▪ Selecting and negotiating</li> </ul>	<ul style="list-style-type: none"> <li>▪ Using monthly performance scorecards with performance audits and SLA development</li> </ul>	<ul style="list-style-type: none"> <li>▪ Evolving relationship structures to risk/reward model with shared risk.</li> </ul>

-John McCarthy, Forrester Group  
*User's Offshore Evolution and its Governance Impact*



# Measure Your Metrics



# Example Metrics

Requirements	Change Management	Test	Iterative Development
Use Cases Analyzed	Defects by Priority	Test Cases Passed	
Use Cases Designed	Defects by Use Case	Test Cases Failed	Team and Individual Velocity
Use Case Traced to Tests	Defects by Team	Total Test Cases	Project Cost Variance
Use Case Volatility	Defects by Feature	Code Coverage by Feature	Work Item Completion Percentage
Requirements Traced to Use Case	Defects Status per Release	Escapes	Project Schedule Variance
Requirements Analyzed	Defect by Age	API Tests vs GUI Tests	Releasability Index
Requirements Traced to Tests	Defects by Design Artifact	Glide Path	
	Project Cost and Schedule Variance		
?	?	?	?

***How Well Are You Monitoring Your Distributed Development?***



# Questions





# Thank You



# IBM Rational Software Development Conference

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