

# Seven Reasons Why Information Technology Projects Fail

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August 11, 2011  
Session 9341

## Abstract

In this presentation, our speaker will explain the main reasons why IT projects fail. Our speaker has a wealth of knowledge in this arena and will discuss IT projects successes and failures based on project-management research and 30+ years of experience in the IT industry.

Do projects fail because they are under-funded? Is it poor communication and management? Are we making the same mistakes over and over again? Is complex IT software and hardware among the main reasons?

Join us for an exciting session from the trenches of IT Project Management. Learn what works and what does not work and why IT projects often fail. Sometimes, the best learning experiences come from learning what "not to do".

# Topics

1. IT project success and failure
2. Factors that influence
3. Brief survey of the literature—why they succeed and why they fail
4. List of seven
5. Assessment tool for project managers
6. Summary
7. References
8. Additional materials are available upon request

# How much IT project success and failure? What are the statistics?



## Standish Group Chaos Report\*



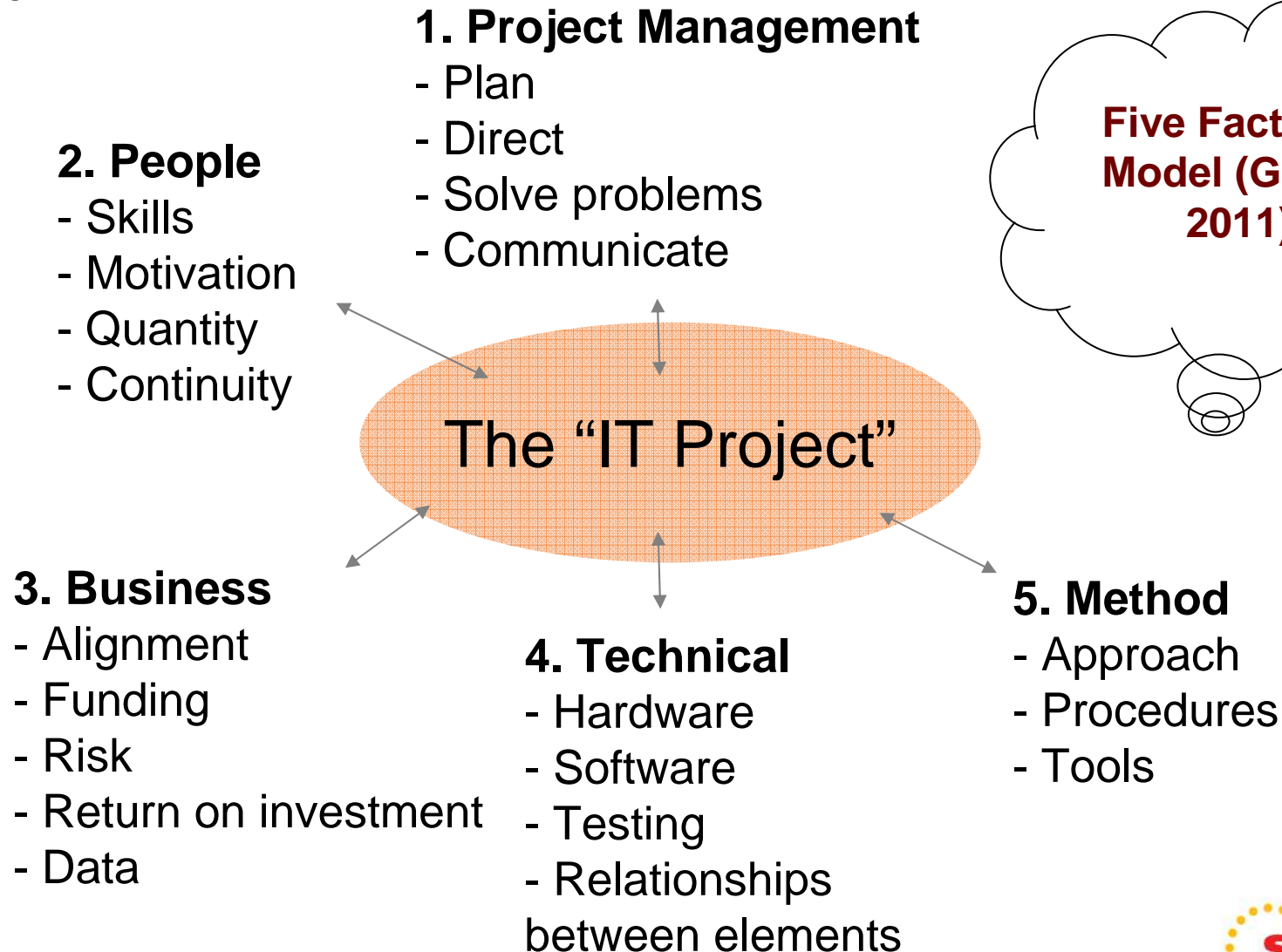
- Low point in 1994, in which only 16% of the projects were successful
- Trend since 1994 is positive
  - ✓ More fully successful projects >34%
  - ✓ Fewer projects cancelled before completion ~15%
  - ✓ Smaller cost overruns ~43%
  - ✓ Smaller schedule overruns ~82% (Oltmann, 2007)

## International Data Corporation (IDC) (Wiklund & Pucciarelli, 2009)



- 25% fail outright
- 20-25% do not meet ROI
- Up to 50% require material rework

# What factors influence the success of a project?



# What do you find in the literature on project management?

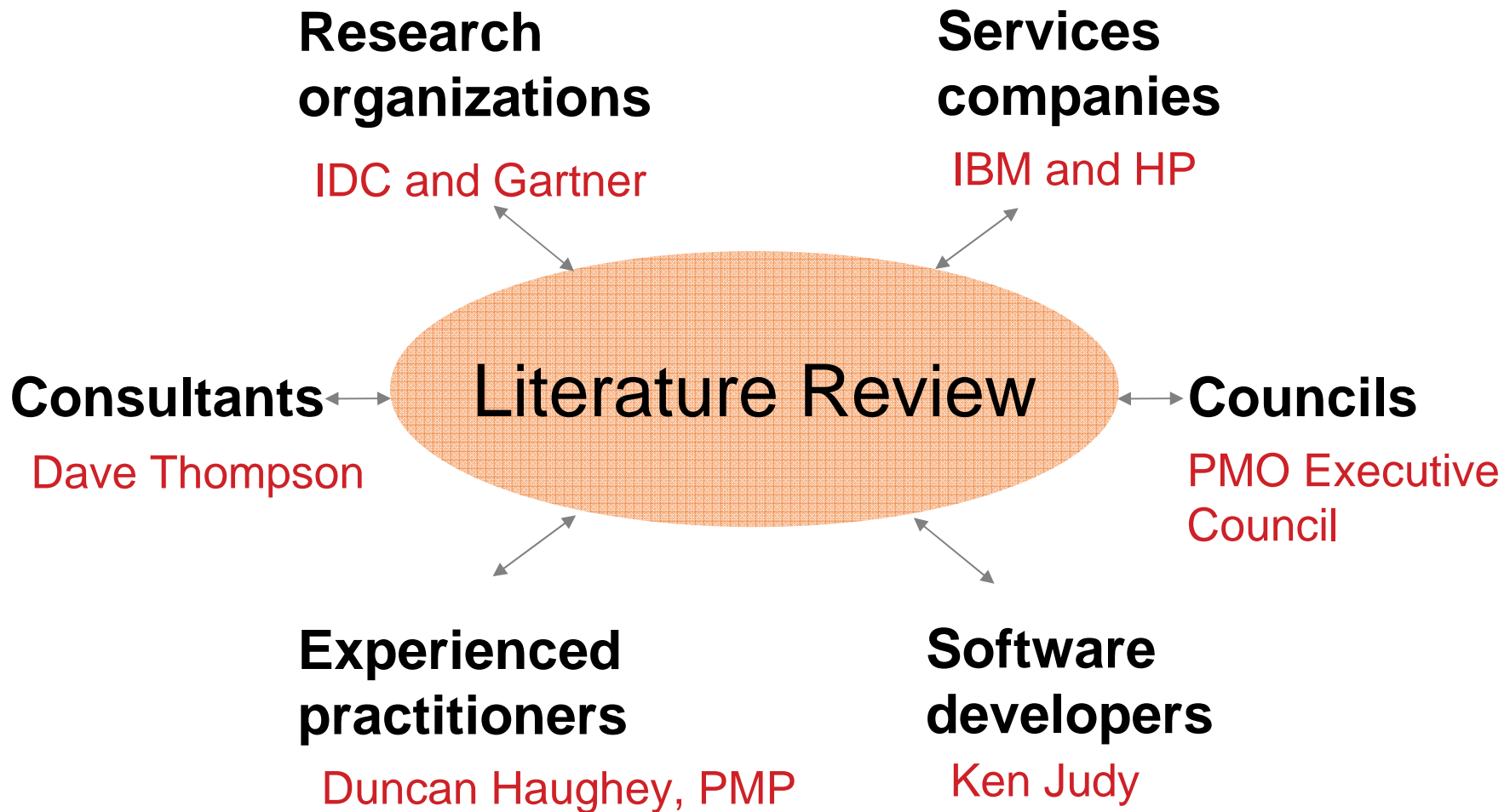


A wide variety of ideas and suggestions to consider and act upon.

- Common pitfalls and challenges
- Key considerations
- Observations, key findings, and conclusions
- Proposed actions
- Focus on risk methodology
- Case study
- Ways that project fail
- Consultant interview—questions and answers
- Reasons for failure
- What does project management mean?
- How much management?
- Success factors

Consolidated in an Assessment Tool for Project Managers (Gulla, 2011).

# Where does the literature come from?



# Snapshot -- Why Projects Fail: Avoiding the Classic Pitfalls (Isfahani, 2010)



Project failures can be easily attributed to a number of factors.

## Common pitfalls

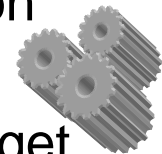


1. Failure to align with constituents
2. Lack of proactive risk management
3. Poor performance measurement
4. Loose definition of project scope and management
5. Insufficient project communication
6. Missing methodology

## Two other considerations



1. Expectation of failure  
Years of industry failures burden every IT project: counteract through leadership, confidence, & controls
2. Role of tools and automation  
Utilize project portfolio management solutions to get help with these challenges





# Snapshot – Why IT Projects Fail (Taimour, 2005)



The most common cause for IT failures are related to project management. Paper focus is the FBI Virtual Case File project.

## Primary causes for the failure of complex IT projects

1. Poor planning
2. Unclear goals and objectives
3. Objectives changing during the project
4. Unrealistic time or resource estimates
5. Lack of executive support and user involvement



6. Failure to communicate and act as a team
7. Inappropriate skills

## FBI Virtual case file example

1. Poor planning including missing dependencies
2. Requirements changed and were not finalized
3. Key requirements were missed
4. High turnover of top IT managers



# Snapshot – Why IT projects fail (Betts, 2003)



Ever wondered why IT project status reports are so upbeat, managers continue to fund losing efforts, and some projects are doomed from the start? Interview with Sue Young, CEO ANDA.

**Why are IT Status reports so rosy?** Reports are not objective.

**Are some IT projects just doomed from the start?** Yes as data is not available or objective is unattainable.

**Why do managers continue to fund losing efforts?** They lack empirical evidence.

**At what point do you kill the project?** When you know it can't succeed.

**What is the best way to kill it?** Be clean and efficient.

**Root of most failures-- technical problems, people, or business problems?** People problems.

**Why do most fail?** No one prevented them from failing.

# Snapshot – After all this ... (Rosenfeld, n.d.)



A failure is defined as any software project with severe cost or schedule overruns, quality problems, or that suffers outright cancellation.

## Reasons for failure



1. Poor user input
2. Stakeholder conflicts
3. Vague requirements
4. Poor cost and schedule estimation
5. Skills that do not match the job
6. Hidden costs of going “lean and mean”

7. Failure to plan
8. Communications breakdowns
9. Poor architecture
10. Late failure warning signals

## Conclusion

The factors of successful project management are well known **they merely need greater attention**

# Snapshot – Why does project management fail? (Bryce, 2006)



It must be remembered that project management is first and foremost a philosophy of management not an elaborate set of tools and techniques.

## Project management represents



1. Discipline
2. Organization
3. Accountability

## Challenge

People seem to have a natural aversion to these attributes

## How much project management is necessary?



1. Individual worker – prepare estimates and schedules, perform project work, and report on activities
2. Project manager – plan, direct, and solve problems
3. Department managers – administer resources
4. Executive management – establish priorities and monitor project progress

# Snapshot – How to increase your IT Project Success (Tan, 2011)



IT project success continues to be below expectations. This Gartner research report recommends how to improve IT success rate based on data from a 845 project sample.

## Key findings

1. 42.5% did not deliver all benefits; 44% were delivered over budget; 42% were not delivered on time
2. Multiple attributes contribute to IT project success
3. Key attributes: (1) planning, (2) project management, (3) consultant/SI experience, (4) user management, and (5) soft skills

## Planning

Clearly defined realistic scope

## Project management

Frequent and open communication

## Consultant/SI experience

Industry specific

## User management

Realistic outcome expectations

## Soft skills

Problem solving and flexibility

# Snapshot – Improving IT Project Outcomes ... (Wiklund & Pucciarelli, 2009)



Research explains a new and different approach to improving IT project performance called Project Hedging Optimization (PHO).

## Methodology focus is on these risks

1. Financial
2. Operational
3. Market
4. Sovereign



(local political instability or terrorist events)



## ➡ Action to consider

1. Strong coordination between technology and finance organizations
2. Common understanding of metrics—payback period, NPV, IRR, etc.
3. Integration of risk into project planning using risk-management tools

# Snapshot – Agile at Scale (PMO Executive Council, 2010)



Study that presents practitioner solutions to help you broaden the scope of your Agile implementation in the project portfolio. Discusses the changed role of the project manager in Agile projects.

## The study is organized in six sections:

1. Establishing guardrails to ensure individual Agile projects are delivered on time, on budget, and within scope.
2. Managing the brand of Agile and cultural change management in the organization.
3. Building a standard vocabulary of Agile competencies in the organization while maintaining flexibility of the teams.
4. Integrating Agile into a global sourcing strategy by building high-performing Agile/iterative teams, even if team members are not collocated.
5. Managing demand from continuously testing teams.
6. Breaking rigid project boundaries to optimize benefits.

New role for Project manager ...

# Snapshot – Project managing to business outcomes (PMO Executive Council, 2009)



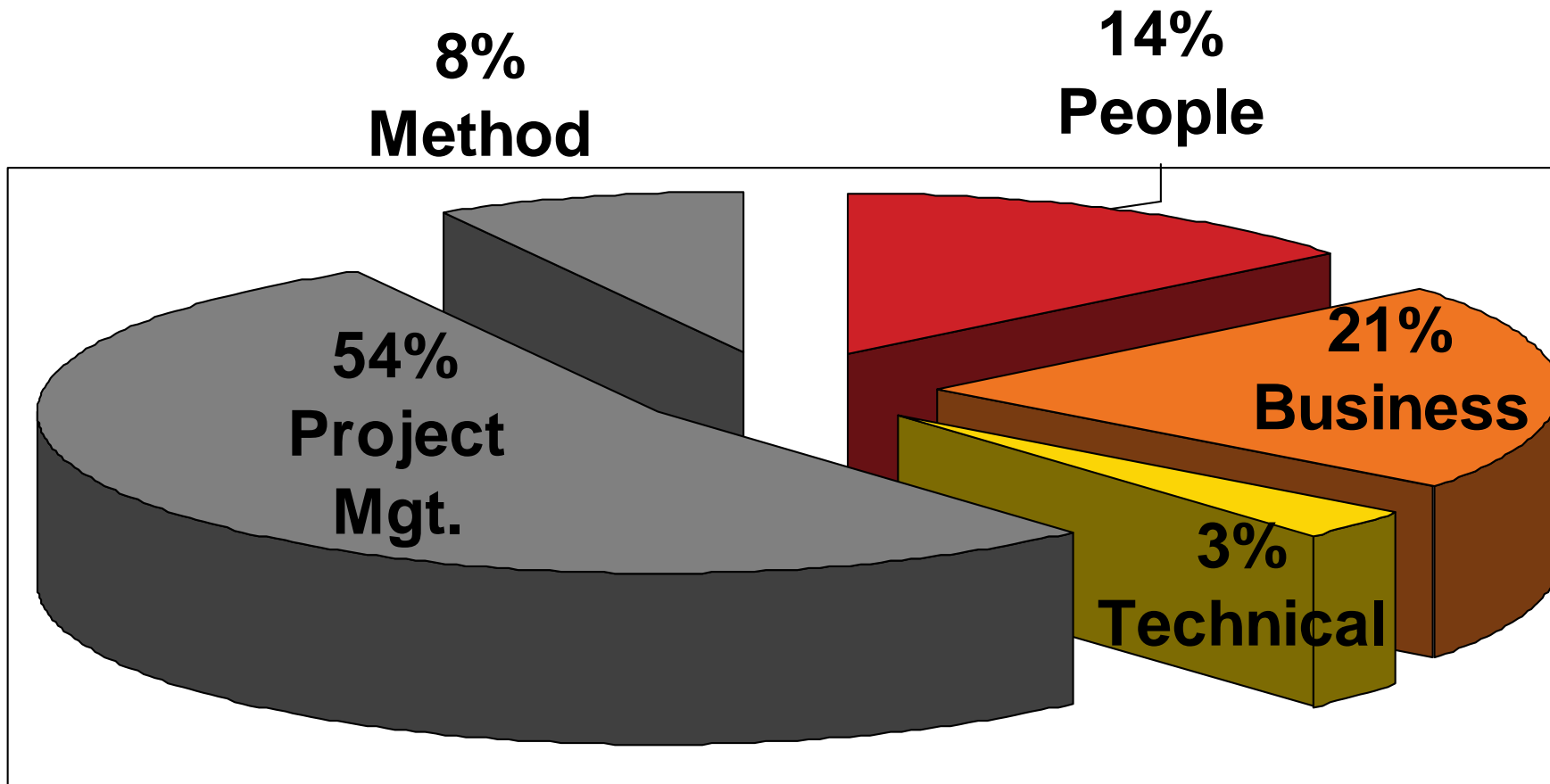
An analysis of the PMO Executive Council's project database reveals a disturbing reality: even among those projects that are delivered on time and on budget, the majority fails to deliver expected business outcomes.

## The study in five findings--

1. On-time and on-budget project performance is necessary but not sufficient for attaining business outcomes.
2. Only a select number of project management activities drive business outcome attainment.
3. Project manager effectiveness is the number-one driver of business outcome attainment.
4. Re-center project planning around business outcomes to estimate and track benefits.
5. Over-manage stakeholder involvement at Concept Definition.



# The problem-category pie by the five factors



Sample contains a total of 99 observations from 17 detailed sources

# List of top seven reasons why IT projects fail



1. Poor project planning and direction
2. Insufficient communication
3. Lack of change, risk, financial, and performance management
4. Failure to align with constituents and stakeholders
5. Ineffective involvement of executive management
6. Lack of skilled team members in the areas of soft skills, ability to adapt, and experience
7. Poor or missing methodology and tools

# 1. Poor project planning and direction

- Evidence
  - “poor planning” and “lack of empirical data”
  - “team does not have clear goals and responsibilities”
  - “missed important items that should have been caught”
  - “poor general management skills”
  - “does not assign the right people to the right task”
- Recommendations
  - Utilize a planning method\* supported by a tool  
Remember the 4 Ps and don't Plunge
  - Make clear assignment to team members and make changes as necessary

\*Rules, processes, and tools for project planning and project management.

# What is a planning method?

- Organic method (items that appear in internal company guidance)
  1. Set up an electronic project notebook (repository)
  2. Establish written project objectives (communication)
  3. Work with the technical lead to establish tasks within phases (planning)
  4. Ask team members to estimate tasks (estimating)
  5. Create a formal project plan and manage to it (directing)
  6. Proactively solve problems that arise (problem solving)

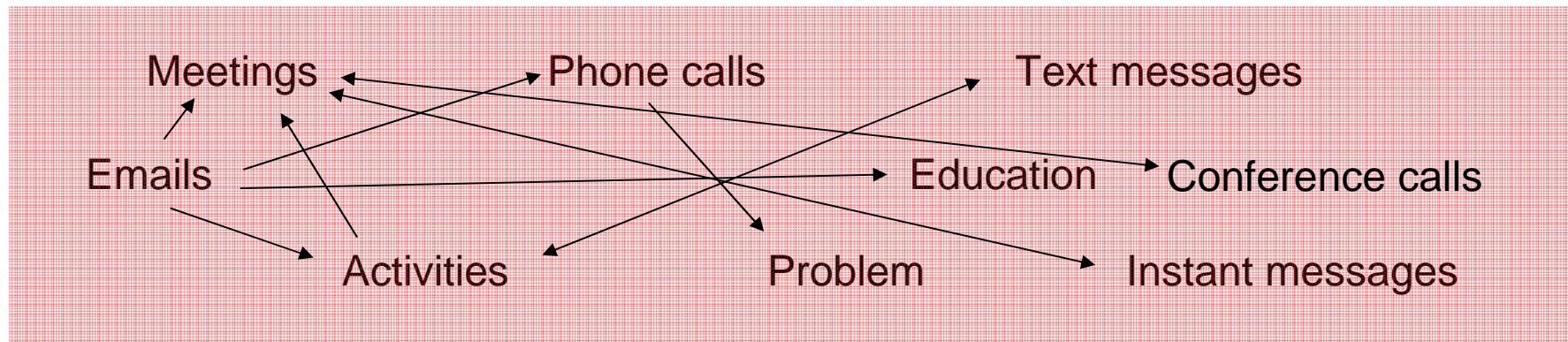
## 2. Insufficient communication



- Evidence
  - “infrequent open communication”
  - “status reports are not objective”
  - “poor communication with sponsors and business users”
  - “failure to properly involve others like hardware vendor”
  - “does not broker consensus among stakeholders”
- Recommendations
  - Agendas, minutes, information-push emails, and for-purpose meetings or conference calls
  - Mix up the way that the message is delivered, especially for executive reviews

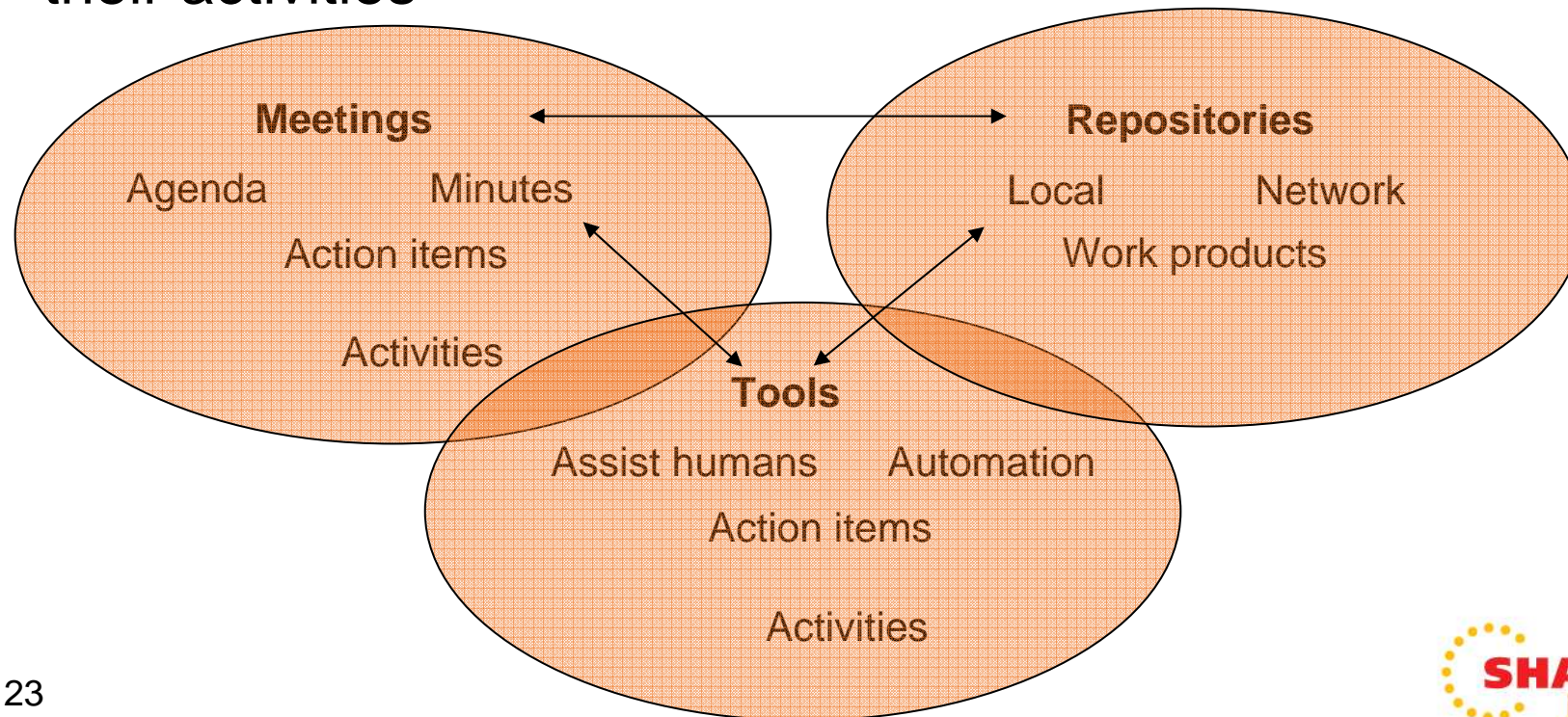
# How can we support the suspend and resume behavior typical of life in IT today?

- Senior people are likely doing several projects or supporting multiple programs at the same time
- Specialized personnel have a narrow focus and are often shared resources
- Daily professional life isn't naturally an ordered set of activities



# Don't underestimate the power of the project manager to create order

- Project managers can have a significant impact on creating order
- Order makes it possible for people to suspend and resume their activities



### 3. Lack of change, risk, financial, and performance management

- Evidence
  - “not managing changing objectives and goals”
  - “lack of proactive risk management”
  - “poor coordination between technology and finance”
  - “no performance measurement”
- Recommendations
  - Implement a straightforward change-management process with estimating and approval steps
  - Utilize a risk-management assessment tool
  - Have finance representation on the team and formalize a business case
  - Identify discrete performance measurements like starts/completes



## 4. Failure to align with constituents and stakeholders



- Evidence
  - “failure to align with constituents”
  - “unmanaged outside forces”
  - “stakeholder conflicts”
  - “poor user input”
  - “poor coordination with core outside teams like finance”
- Recommendations
  - Target specific initiatives to ensure interlock and communication with stakeholders
  - Suggestions--Input gathering meetings, communication to push information, sign-offs of work products, etc.

# 5. Ineffective involvement of executive management



- Evidence
  - “insufficient high-level sponsorship”
  - “executive does not monitor project progress”
  - “executive management does not establish priorities”
- Recommendations
  - Participation of executive sponsor in key operational working sessions with overall team
  - Specific status meetings and communications targeting executive management
  - Solicit go/nogo at key decision points

## 6. Lack of skilled team members in the areas of soft skills, ability to adapt, and experience



- Evidence
  - “slow to adapt” and “lack of experience”
  - “team does not have the right composition of skills” or “skill do not match the job”
  - “lack of focus” and “lack of maturity”
- Recommendations
  - Utilize mentoring approach for less experienced team members
  - Include required education in overall project schedule
  - Actively seek the skilled personnel through internal and external routes (jobs system)

## 7. Poor or missing methodology and tools

- Evidence
  - “project methodology and tools are poor”
  - “not using proper tools and automation”
  - “lack of methodology to achieve beyond basic level of success”
  - “no benefits management or portfolio management”
- Recommendations
  - There needs to be a methodology or framework upon which the management is based even if it is organic
  - Formal methods (next page) can have significant payback

## Three examples of formal methods

1. Projects IN Controlled Environments (PRINCE) is a structured project management method used in the United Kingdom.
2. Project Management Body of Knowledge (PMBOK) is an ANSI Standard PMI– 99– 001– 2000 describing the various attributes of a project management method.
3. Capability Maturity Model (CMM) is a collection of model frameworks for assessing the maturity of a specific practice.
  - Software, People, Software Acquisition, Systems Engineering, and Integrated Product Development
  - These models are supported by a software process assessment standard ISO/IEC 15504

# CMM and project management



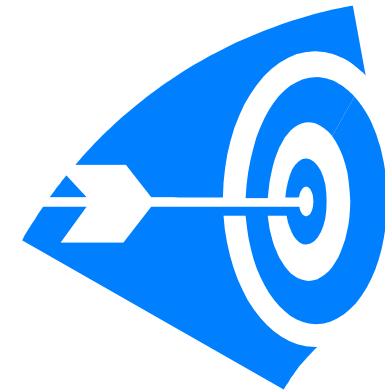
## Capability Maturity Model – Integrated

Level	Focus	Process Areas	Result
<b>5 Optimizing</b>	<b><i>Continuous process improvement</i></b>	Organizational Innovation & Deployment Causal Analysis and Resolution	<b>Productivity &amp; Quality</b>
<b>4 Quantitatively Managed</b>	<b><i>Quantitative management</i></b>	Organizational Process Performance Quantitative Project Management	
<b>3 Defined</b>	<b><i>Process standardization</i></b>	Requirements Development Technical Solution Product Integration Verification Validation Organizational Process Focus Organizational Process Definition Organizational Training Integrated Project Management Risk Management Decision Analysis and Resolution	
<b>2 Managed</b>	<b><i>Basic project management</i></b>	Requirements Management Project Planning Project Monitoring & Control Supplier Agreement Management Measurement and Analysis Process & Product Quality Assurance Configuration Management	
<b>1 Initial</b>	<b><i>Competent people and heroics</i></b>		

# Assessment tool for project managers



1. Basics
2. Project management
3. Risk
4. Hardware
5. Software



# Basics



1. Clear project goals? Yes/no. If no, what is not clear?
2. Firm project scope? Yes/no. If no, is change-management being used?
3. Achievable plan? Yes/no. Note: the scope of this question is feasibility.
4. Adequate resources? Yes/no. If no, what additional resources are needed?
5. Sufficiently skilled team members? Yes/no. If no, what skill-areas are missing or are too few?
6. Turnover in personnel? Yes/no. If yes, why are people moving off the project?
7. Team is motivated to succeed? Yes/no. Of no, what could be done to heighten motivation?
8. Communication plan in-place? Yes/no. If no, what is needed to establish regular communication?
9. Problems being shared with management? Yes/no. If no, why are they not being shared?
10. Functional management involved at the right level? Yes/no. If no, what can you do to change this?
11. Senior management participating in executive status? Yes/no. If no, should there be senior-management meetings or communications?



# Summary

Projects fail for a number of reasons—

1. Poor project planning and direction
2. Insufficient communication
3. Lack of change, risk, financial, and performance management
4. Failure to align with constituents and stakeholders
5. Ineffective involvement of executive management
6. Lack of skilled team members in the areas of soft skills, ability to adapt, and experience
7. Poor or missing methodology and tools

Improving the success rate of projects is possible if we put significantly more focus on general-management activities

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## Speaker Biography



Dr. Joseph Gulla is an executive IT specialist for IBM, focused on managed services. His current assignment is a project that is planning the migration of clients to a new infrastructure model. He is also involved in a managed services project in Austria and a upcoming services deployment in South Korea.

He has published and presented over 70 documents in a wide variety of forums, including SHARE (Boston and Denver), IDC Outsourcing and Managed Services conference (Dublin), the Technical Leadership Exchange (Orlando and Los Angeles), the High Availability “Best Practices” Topical Conference (Ontario), Internet Society Conference (Sweden), Professional Leadership Technical Exchange (Paris and Vienna), Planet Tivoli (Lisbon) and Enterprise Systems Management Share Net (Chicago).

Dr. Gulla is also a faculty member of the Nova Southeastern University, where he teaches distributed computing, enterprise architecture and systems development process. His dissertation final report, *Design and Implementation of a Prototype Toolset for Full Life-Cycle Management of Web-Based Applications*, was published as an IBM technical report in 2003.