

Organization Strategy and Project Selection



Dr. Mark C. Paulk
SE 4381, Software Project Planning and Management

Management Topics

1. Modern project management

PMBOK

 **2. Organization strategy and project selection**

3. Organization: structure and culture

4. Defining the project

5. Estimating times and costs

6. Developing a project plan

7. Managing risk

8. Scheduling resources and cost

9. Reducing project duration

10. Leadership

11. Teams

12. Outsourcing

13. Monitoring progress

14. Project closure

15. International projects

16. Oversight

17. Agile PM

Critical chain project management

Strategic Management

The process of assessing “what we are” and deciding and implementing

- **what we intend to be**
- **how we are going to get there**

Strategy describes how an organization intends to compete with the resources available in the existing (and perceived future) environment.

- **responding to changes in the external environment**
- **allocating scarce resources of the firm to improve its competitive position**

Strategy

Strategy is implemented through projects.

Every project should have a clear link to the organization's strategy.

- **integration assumes the existence of a strategic plan and a process for prioritizing projects by their contribution to the plan**
- **the problem in many organizations is in implementing strategies, not formulating them**

Success depends on an open and transparent process for all participants to review.

Project Managers and Strategy

Project management is the apex of strategy and operations.

Project managers need to understand the organization's mission and strategy so they can

- make appropriate decisions and adjustments**
- be effective project advocates**

Serious Mistakes

Focusing on problems or solutions that have low priority strategically

Focusing on the immediate customer rather than the whole marketplace and value chain

Overemphasizing technology as an end in and of itself

- **resulting in projects that wander off pursuing exotic technology that does not fit the strategy or customer need**

Trying to solve every customer need with a product or service rather than focusing on the 20% with 80% of the value (Pareto's Law)

Engaging in a never-ending search for perfection that no one (except the project team) really cares about

The Organizational Mission

Identifies what we want to become

Communicates and identifies the purpose of the organization to all stakeholders

Rule of thumb – if the statement can be anybody's mission, it will not provide the guidance and focus needed

- provide hospital design services?
- increase shareholder value?
- provide high-value products to our customer?
- provide voice/data design services?
- provide IT services?

Goals and Objectives

Translate the organization mission into specific, concrete, measurable terms

Set targets for all levels of the organization

Answer in detail where a firm is headed and when it is going to get there

Cascading of objectives

- **each level below the organizational objectives supports the higher-level objectives in more detail**

Organizational objectives drive the projects

SMART Goals

Specific

Measurable

Agreed-upon (achievable, attainable)

Realistic (reasonable, relevant, results-based)

Time-bound (time-related, timely)

***D.A. Schmaltz, "Keys to Setting Achievable Goals,"
Software Testing & Quality Engineering, July/August 2000.***

Strategy Formulation

Who are the customers?

What are their needs as they (the customers) see them?

What are the internal strengths and weaknesses of the enterprise?

- opportunities and threats are the flip sides of each other

SWOT analysis

- strengths, weaknesses, opportunities, threats

Scenario Planning

Scenarios are stories of how we believe things could play out in the longer run

What is the core business of the organization and its environment?

- what products and services do you provide?
- how fast is your industry changing?

What global forces could alter the way your organization does business?

- black swans...

Narrow perhaps 100 events to 2-4

- what options would you have?
- what are the underlying causes for the scenario?
- what are the triggers?

An Effective Portfolio Management System

**Need a strong priority system linked to strategy
to avoid problems**

Problems

- **the implementation gap**
- **organization politics**
- **resource conflicts and multitasking**

The Implementation Gap

Many organizations leave strategy implementation to functional managers

→ strategy disconnect

→ unclear priorities

- **conflicts frequently occur among functional managers and cause lack of trust**
- **frequent meets are called to establish or renegotiate priorities**
- **people frequently shift from one project to another depending on current priority**
- **employees are confused about which projects are important**
- **people are working on multiple projects and feel inefficient**
- **resources are not adequate**

For organizations with short product life cycles, participation from all levels in strategic planning and implementation is needed.

The implementation gap refers to the lack of understanding and consensus of organization strategy among top and mid-level managers.

- Deloitte Consulting: only 23% of nearly 150 global executives considered their project portfolios aligned with the core business**

Resource Conflicts and Multi-Tasking

**Multiple projects → need to share resources
→ project interdependency**

Resource sharing leads to multi-tasking

The number of small and large projects in a portfolio almost always exceeds the available resources
• typically 3-4X

It is difficult to make sense of an ambiguous system
• lack a priority system clearly linked to the strategic plan

Multi-Tasking Pros and Cons

Drivers of multi-tasking

- **complex world with many different tasks that need to be performed**
- **need to efficiently use available resources**

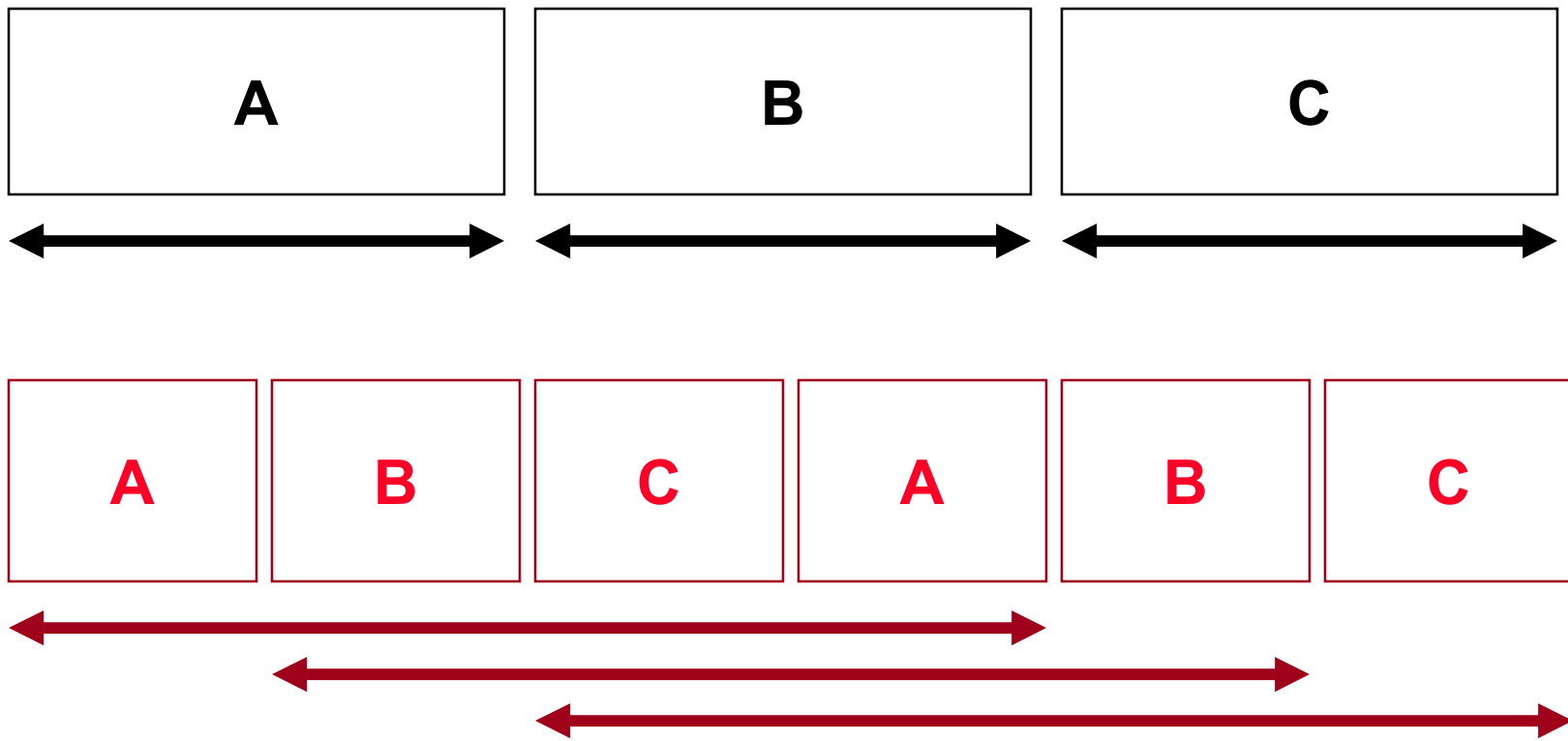
Problems with multi-tasking

- **kills lead time (throughput)**
- **lack of focus decreases productivity (because of switching time)**

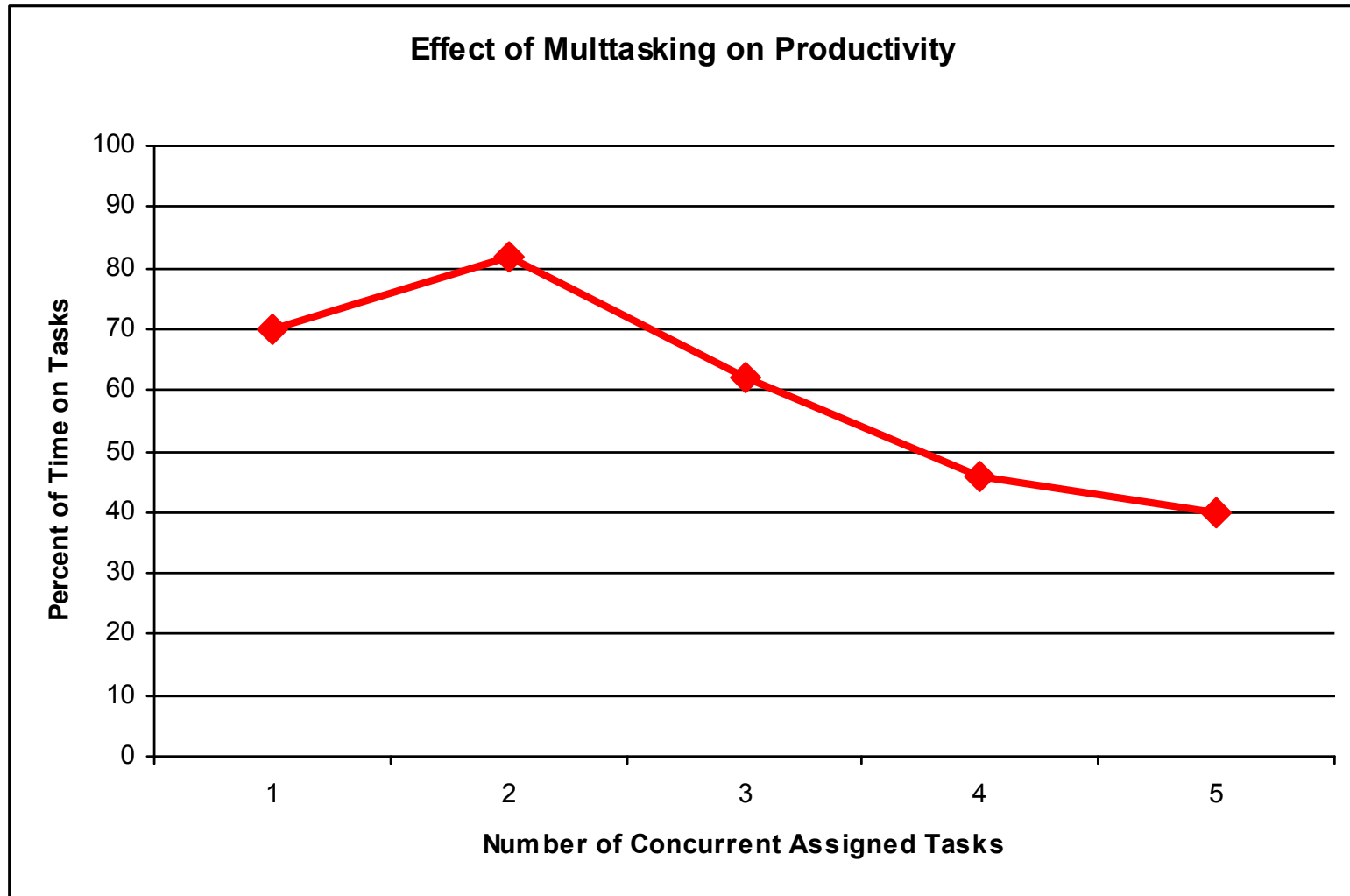
CCPM: Multitasking

Multitasking is probably the biggest killer of lead time.

- *E. Goldratt, Critical Chain, page 126*

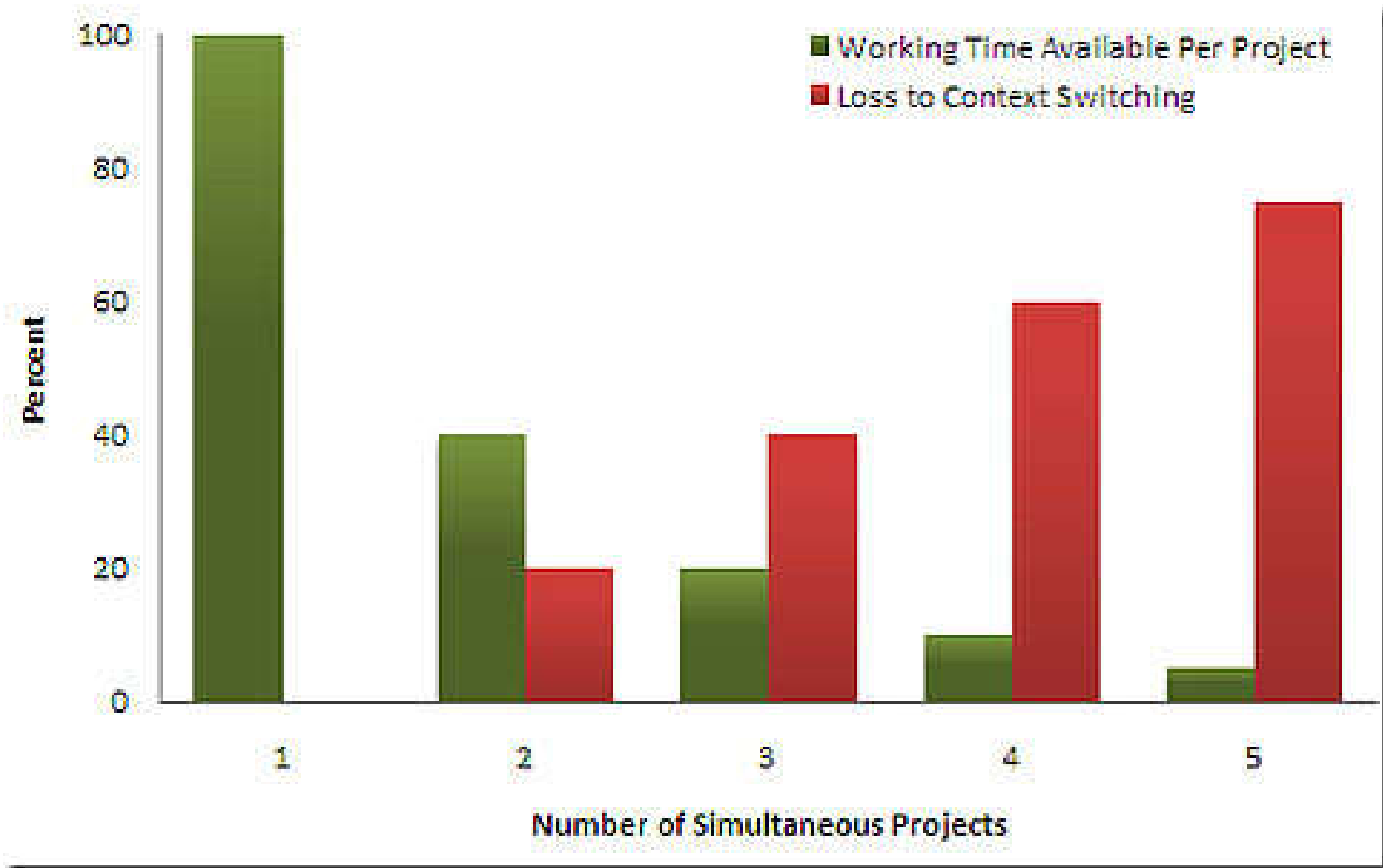


Multitasking Impact on Productivity



K.B. Clark and S.C. Wheelwright, Managing New Product and Process Development: Text and Cases, 1993.

Weinberg (1997) on Context Switching



Multi-Tasking Is Part of Our Culture

Many companies are looking for employees who multi-task well... in spite of the evidence that it decreases productivity.

If you have to multi-task in your business environment, the key to performance is focusing on the high-priority tasks first.

- Do you prioritize urgent over important tasks?**

So if asked, the smart thing would be to say that you know how to maximize your productivity in a multi-tasking environment by focusing on the high-priority tasks. Or similar wording.

A Portfolio Management System

Classifying Projects

Must-do projects

- **compliance – needed to meet regulatory requirements**
- **emergency**

Operational projects – support current operations

Strategic projects – directly support the organization's long-run mission

“Mix and Match” Approach

Chaparral Steel policy (40-50 projects)

Advanced development projects – one or two

- high-risk endeavors involving creation of a breakthrough product or process
- dedicated project teams

Platform projects – three to five

- medium-risk projects involving system upgrades that yield new products and processes
- strong matrix

Incremental projects – the rest...

- low-risk, short-term projects that involve minor adjustments in existing products and processes
- weak matrix

A Portfolio Management System Selection Criteria

Financial

- **payback model**
- **net present value (NPV) model**

Nonfinancial

- **checklist model**
- **multi-weighted scoring model**

Companies using predominantly financial models to prioritize projects yielded unbalanced portfolios and projects that aren't strategically oriented.

Payback Model

How long will it take to recover the project investment?

Payback period (yrs)

= Estimated project cost / Annual savings

Ignores the time value of money

Assumes cash inflows for the investment period (and not beyond)

Does not consider profitability

Net Present Value Model

Uses management's minimum desired rate-of-return to compute the present value of all net cash inflows

Higher positive NPVs are desirable

$$NPV = I_0 + \sum_{t=1}^n \frac{F_t}{(1+k)^t}$$

where

I_0 = initial investment (negative since outflow)

F_t = net cash inflow for period t

k = required rate of return

Checklist Models

Most frequently used model

A list of questions to review potential projects and determine their acceptance or rejection

- strategy alignment
- drivers
- success measures
- sponsorship
- risks
- benefits / value / ROI
- resources
- training
- portfolio
- technology
- ...

Multi-Weighted Scoring Models

Each selection criterion is assigned a weight

Qualitative and/or quantitative criteria

Criteria should mirror the critical success factors for the organization

Balanced Scorecard (Kaplan and Norton)

Financial

- encourages the identification of a few relevant high-level financial measures
- how do we look to shareholders?

Customer

- how do customers see us?

Internal business processes

- what must we excel at?

Learning and growth

- how can we continue to improve, create value and innovate?

Using Models

Models should not make the final decisions

No model can capture the total reality it is meant to represent

All models are wrong. Some models are useful.

- George Box

Questions and Answers

