

Tailoring Project Processes

**Dr. Alexander Laufer
Knowledge Sharing Meeting
March, 2001**

“This study found that success was not achieved by omitting steps in the Life Cycle Development process, but by innovatively tailoring the process to fit the constraints of the specific project”

Fast Track Study, 1996, PPMI, NASA

“While the PAPAC process and all requirements should be addressed, managers can tailor approaches consistent with program or project characteristics such as size, complexity , cost, and risk.”

*NASA Procedures and Guidelines:
7120.5A, 1998.*

What does PMI say about tailoring?

Nothing!

*A Guide to the Project Management
Body of Knowledge,
PMBOK Guide, 2000 Edition,
Project Management Institute.*

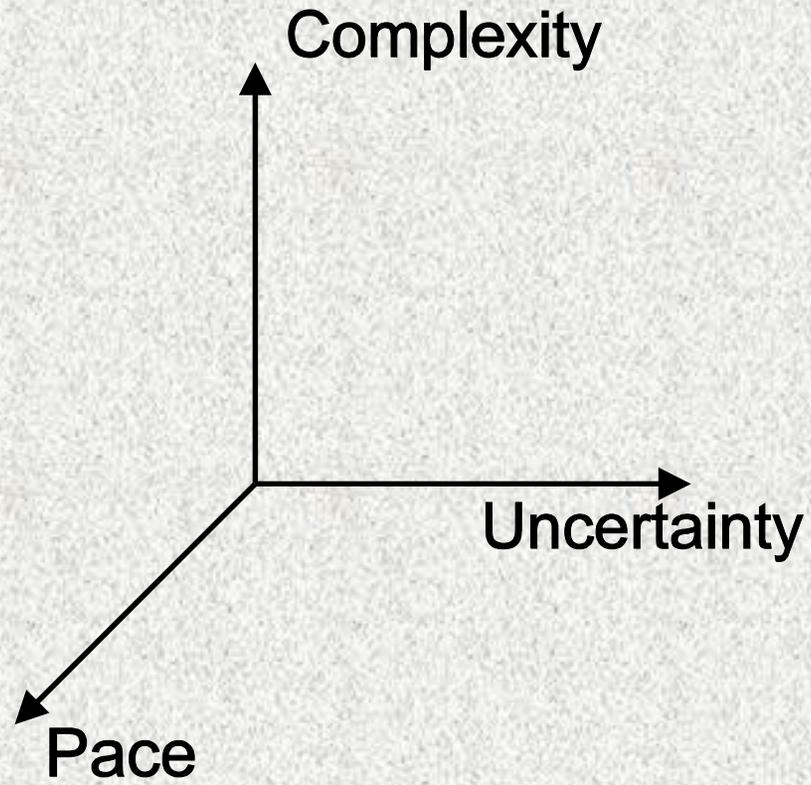
Standard Procedures: An Example

The brightly painted car streaks around the racetrack under the blazing sun. It's late in the race. The driver pulls off for crucial last pit stop before the final push for the checkered flag. Time is of the essence. Hands fly in a blur of precision as all four tires are changed, the engine checked, gas added, the windshield cleaned, and the driver given fluids. In about 16 seconds the car is ready and the driver pulls out to rejoin the race.

What has changed since Taylor's “one best way” approach?

- Customer's role is dominant
- Environment is more dynamic
- Tasks are mental, unique, and complex
- Society is more democratic and educated

- Individuals have higher aspirations and expectations
- Government's role is less clear, and its performance more closely scrutinize
- Sources of knowledge are different (tacit knowledge, the practitioner)



The UCP Model

One-Dimensional Analysis

High Technological Uncertainty

- **More design cycles, late design freeze**
- **Considerable flexibility**
- **Redundancy**

High Complexity

- **Bureaucracy, documentation**
- **Large teams**
- **Efficiency**

High Pace

- **Small and strong teams
(with considerable autonomy)**
- **Simple procedures**
- **Overlap of phases**

Rationale for Employing Standard Processes in Today's Projects

- Standard processes (project procedures, best practices and tools) prevent reinventing the wheel, and save time and energy.
- They also provide a common vocabulary, avoid ambiguity, and help establish internal stability.
- Standard project procedures serve as the organizational retention system, where the accumulated explicit knowledge is stored.

Streamlining the United States Coast Guard Infrastructure

Captain Craig Schnappinger and LT Sue Subocz, U.S. Coast Guard

In the Streamlining process, the Headquarters personnel got away from their review and approve/disapprove role and served, instead, as advisors to the field execution offices from the outset, to steer them away from actions or plans that might lead to approval delays. In some instances, the Headquarters representative minimized delays by actually generating the planning documents, which was a great time saver.

Cont.

The approval process itself was also streamlined. We developed a single approval document for Headquarters review instead of the two, normally required. We then revised the approval requirements. Under the standard procedure, a project could not move forward until all reviewing offices had made comments on the planning documents and their concerns had been addressed. For the Streamlining project, though, each office was given a five-day review period. If comments were not received by the end of this five-day period, approval was assumed. This forced the reviewing offices to act quickly, a pressure they did not normally feel.

Project Management Success Stories: Lessons of Project Leaders, A. Laufer & E.J. Hoffman, Wiley, 2000, pp. 95-101.

Meeting a Tight Project Schedule without a Comprehensive Network

LCDR Jim Wink, U.S. Navy

.....

Normal procedures didn't allow the contractor to mobilize without an approved project schedule. But due to the climate of cooperation we were working under and the urgency to get things started, I suspended normal procedures and allowed the contractor to commence site work while he continued to develop his schedule.

..... By final acceptance, more than 200 major action items had been resolved by our team. One item, however, was never satisfactorily resolved-the CPM schedule.

.....It seems to me that with so many open issues and uncertainties arising from the nature and pace of the project, it was impossible to submit a comprehensive, detailed and useful plan. Only through the systematic, collaborative efforts of the team to identify areas of uncertainty, and then to solve them immediately, was the project a success.

Even so, we didn't throw the schedule out the window. Our initial bar chart functioned well. We received several attempts at the CPM and, although the network was flawed, there was enough information on the schedule for planning and time analysis. The weekly reviews provoked many of the questions that uncovered other areas of project uncertainty. In the final analysis, the list of problems, the partial schedules, the weekly meetings and our flexibility all contributed to a very successful management of time and resolution of problems on this project.

Project Management Success Stories: Lessons of Project Leaders, A. Laufer & E.J. Hoffman, Wiley, 2000, pp. 76-78

A Few Context Factors

EXTERNAL ENVIRONMENT

- Unpredictability, hostility, and heterogeneity
- Degree of dependence on environment
- Customer, consumer (public, private, culture, experience)

A Few Context Factors

OBJECTIVES & CONSTRAINTS

- Ambiguity, conflicts, stability
- Strategic importance
- Level of required performance, speed
- Special constraints and risks (e. g. funding)
- Type of contract

A Few Context Factors

TASK

- Degree of innovation (previous experience)
- Scope (size and duration)
- Interdependence & heterogeneity of task's components
- Type (technical, business, organizational)

A Few Context Factors

ORGANIZATION & HUMAN RESOURCES

- Structure, systems, culture (of parent organization & project)
- Top management support
- Project leader (competence, experience)
- Team members, other contributors (experience, skills, culture)

**Ashby's Law of Requisite Variety:
Only Variety Can Absorb Variety
(1956)**

A system cannot meet increasing variety in its environment unless it increases the range of its response repertoire.

Developing Project Definition

- **“Rational” and rigorous approach, relying only on pre-specification.**
- **Prototyping approach.**

“Rational” = *logical, explicit and analytical form of reasoning, basically linear, where everything must be worked out in advance and be documented.*

Controlling Project Performance

- **Feedback systems that monitor and diagnose project outcomes**
- Effective front-end planning
- An extensive effort in selecting the right people
- Culture that establishes supportive belief systems
- Rules and processes that guide behavior (input)
- **Managers that adopt a moving about mode of operation**

Principles Derived from “*Project Management Success Stories*”

- **Employ formal *and* informal processes.**
- **Fit processes to the situation.**
- **Legitimize judgment-based decisions.**

OLD <i>(Espoused theory, explicit)</i>	NEW <i>(Theory-in-use, tacit)</i>
One best way	Tailoring <i>AND</i> One best way
Objective analysis	Subjective judgment <i>AND</i> Objective analysis

Applying the Law of Requisite Variety

An organization needs to develop processes of **requisite variety**.

That is, the organization needs sufficiently formal and standard *processes* to achieve **efficiency** (and consistency), and sufficiently informal and flexible *processes* to allow **adaptability** (and innovation). _____ cont.

People can employ these processes effectively only if they develop a capability to discriminate, judge, and adapt, and if they operate in a *culture* that fosters this kind of behavior.

A Few Open Questions

1. To what extent the right degree of looseness/tightness is dependent on the **individual** applying the process?
2. Are there **processes** that should be always applied as “one best way”?

3. How often should/can tailoring be applied, and by whom (i.e., the project manager or his/her superior)? That is, how much autonomy do you grant your project managers? To what extent do you trust the experienced practitioner, or do you still want to “control” tailoring? Is “rational” justification required for documentation and approval? Is it always possible?

4. How do you reconcile tailoring with **ISO 9000** (+) or with reengineering efforts? What is the meaning of a “best practice” in a tailored environment?

5. How do you enhance **people's** discrimination, judgment, and adaptation capabilities?

6. How do you shift the **organization's** mind-set to accept (and adopt) the law of requisite variety? How do you change the culture to support it?

7. To what extent the **government** is constrained by law or by public expectation in its ability to apply tailored processes?