A Project Management Immaturity Model
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This article has been inspired by "A Software Process Immaturity Model" by Anthony Finkelstein (ACM SIGSOFT Software Engineering Notes vol 17 no 4, October 1992, pp. 22-23).

The software process maturity model (Bate, Roger, et al, *A Systems Engineering Capability Maturity Model*, Software Engineering Institute, Carnegie Mellon University, 1995) is now well established, and together with the associated assessment approaches, has been the focus of considerable attention from industry as well as consulting and research organisations. The model breaks down the software engineering capabilities of organisations into 5 maturity levels from Level 1 (Initial), to Level 5 (Optimising). The model is summarised in Table 1 below.

LEVEL	CHARACTERISTIC	KEY PROBLEM AREAS	
5: optimising	Improvement fed back into process	Automation	PRODUCTIVITY & QUALITY
4: managed	measured process	Changing technology Problem analysis Problem prevention	
3: defined	process defined and institutionalised	Process measurement Process analysis Quantitative quality plans	
2: repeatable	knowledge of correct approach amongst implementers	Training Technical practices Process focus	
1: initial	ad hoc / chaotic / process dependent on individuals	Project management Project planning Configuration management Software quality assurance	

Table 1: a software process maturity model

Assessments carried out on a large number of organisations seem to indicate that a significant proportion (according to SEI data more than 70%) of these organisations are at Level 1. These figures are misleading in that many of these organisations lie well below the merely chaotic: just like for an iceberg, most of the volume is below the water line.

Based on my experience, this is also very true in the Project Management domain. Most organisations actually belong to Levels 0 to –3 of the extended immaturity model proposed below (adapted from Finkelstein, Schorsch [*The Capability Im-maturity Model (CIMM),* Nexus, August 1996]). This model is summarised in Table 2.

LEVEL	CHARACTERISTIC	KEY FOCUS AREAS	
0: incompetent	failure to follow successful project management process	Project reporting	SANITY
-1: obstructive	counter-productive process imposed	Compliance Management control	
-2: antagonistic	disregard for good project management principles institutionalised	Overheads of project management	
-3: psychotic	Priority given to making other parts of the organisation look worse than you	Everyone else	

Table 2: a project management immaturity model

All immature organisations (in contrast to Level >0 organisations) fail to recognise that their management is part of the problem. In fact, the more management gets involved in the whole process, the more it goes wrong. Management therefore gets more involved. This can become a vicious feedback loop. This is similar to the approach of boiling an egg for longer and longer in the hope that it will eventually get soft.

Level 0 - Incompetent:

Whereas the ad-hoc and chaotic processes followed by organisations at Level 1 can, by dint of exceptional individual and team effort, produce successful projects, incompetent organisations act in such a way as to prevent this effort bearing any fruit. Where specifications and documentation are produced, an incompetent organization fails to share them with a number of key contributors. Where a successful project management team is working, an incompetent organisation will reallocate critical members to "help other teams that are not doing so well", thereby causing both projects to fail. Where a deliverable is produced they will so mismanage the customer relationship that the project gets a bad reputation.

Incompetent organisations perceive their primary problem to be project reporting. With detailed reporting in place they are guaranteed, they believe, to allow top management to seize the initiative and save the day if disaster threatens.

Incompetent organisations block effective project management by top-level micro-management.

Level –1 - Obstructive:

Obstructive organisations act positively to subvert project management. These organisations insist on complex processes, involving the use of arcane procedures and inappropriate documentation standards. They deploy significant effort and a substantial proportion of their resources in order to impose these. They insist that busy project staff spend a large proportion of their time on "focus teams", "process improvement groups (PIGS)", and other study groups aimed at understanding where effort is wasted.

Obstructive organisations perceive their primary technical problem to be lack of compliance with the directives. If everyone adhered to the (ever-changing) set of directives, they believe that mistakes would be avoided as the work progresses. They act as if adding spurious detail to an unnecessary set of procedures will make them easier to use and more widely applicable.

Obstructive organisations glorify creativity and inventiveness and prefer to change direction very frequently rather than take the risk of missing the latest bandwagon. Prior data is destroyed at each change of direction.

Obstructive organisations, while acting in such a way as to prevent projects from progressing unhindered, sincerely believe that they are assisting. They replace productive action with procedural activity, and product performance with process pride.

Level –2 – Antagonistic:

Antagonistic organisations are contemptuous of project management. They do not care if they overrun cost and time forecasts as they will probably be able to change the requirements and expectations before they are measured. Antagonistic organisations have no individuals who attempt to apply professional project management, having dismissed them or abused and cowed them into submission.

Antagonistic organisations have a manual describing their development process written many years ago either by a senior manager or a summer student, but who, anyway, has long since left the firm. It has never been reviewed, let alone applied. They are proud that nobody ever reads it, and should anybody want to read it they would be ridiculed as ignorant and/or process-fixated.

Antagonistic organisations reward failure by branding the person who delivers as promised a boring drudge, whereas the person who came up with all of the novel plans, but failed to achieve them is rewarded for trying so hard in such a challenging environment.

Only by a miracle can an antagonistic organisation produce any valid deliverables. As antagonistic organisations rarely get beyond specification they pin their hopes on moving forward with a mixture of threats and promises, goals and "stretch targets", none of which are based on anything more than hope and hubris. If success ever occurs, it will then always be quoted as a clear justification for never using any Project Management methods.

Level –3 - Psychotic:

Psychotic organisations understand that success is relative and that it is much easier to cause others to fail than it is to outshine them fairly. A psychotic organisation will ensure that it has responsibility for critical elements of projects from other parts of the organisation, and will then ensure that it does not meet its commitments. This will of course be done in a covert manner, for example, by requesting increasingly more information about the work to be carried out, inviting a different member of the management team to each meeting so that the entire project history has to be explained each time, or proposing frequent and complex "improvements" to the deliverables for which they are responsible.

Psychotic organisations will ensure that any failure, error or shortcoming in other parts of the organisation become rapidly visible to the management. They will do this while remaining "good team players" by carrying out very public "coaching reviews", "progress analysis meetings", etc. on any project that they feel can make them look like relative champions.

A psychotic organisation will also make sure that the work they do appears to be much more complex, risky and stressful than the work of any other groups. In this way, they also have the excuse, in case their failures are remarked upon, of explaining that none of the other groups have the skills and courage to attempt this work – thereby gaining on two fronts, by making themselves look like heroes at the same time as they make the others look like deserters.

Conclusion

Immature organisations never sponsor or use consistent formal processes though this does not prevent them from wishing to have a say in the way project management execution and control are carried out. Immature organisations will either refuse to change with the times, or will only adopt an approach if it is the latest fashion - and then they will never stay with it long enough to reap the benefits. They will ridicule the person who is still trying to apply the previous "flavour of the month". Whatever they say in public, the management actually believes that adherence to process is an admission of weakness and cowardice – real men think on their feet and shoot from the hip.

Assessment: The Project Management Macho Maturity Model

In order to provide additional insight into your organisation, a simple questionnaire and "scoring sheet" has been developed. This is presented below as the Project Management Macho Maturity Model ("PM4").

The assessment is carried out in relation to topics described in APM's "Body of Knowledge" (4th edition, 2000, Association for Project Management, Cambridge Publishing Management, www.apm.org.uk).

Each topic is presented and the typical Macho Management response is proposed. To assess your organisation, you need to indicate whether, in your organisation, this response is **a**) very frequent **b**) fairly frequent **c**) unusual and **d**) never occurs. Score 3 for each **a** response, 2 for **b**, 1 for **c** and 0 for **d**. An analysis of the scores is given at the end.

	Topic	Management response	Score
2	**Strategic**		
20	Project success criteria	"It had better make **me** look good"	

	Topic	Management response	Score
21	Strategy/ Project Management Plan	"We want none of that analysis paralysis – get on with some real work"	
22	Value Management	"If I want it, it's worth doing"	
23	Risk Management	"I ain't scared. Just get on with it or I'll find you something to be scared about!"	
24	Quality Management	"You do the job, I'll get it accepted"	
25	Health, Safety and Environment	"Make sure you hide your rubbish and bury your dead"	
3	**Control**		
30	Work content and Scope Management	"Do what I say and follow me as I change direction"	
31	Time Scheduling/Phasing	"Your stretch goal is to finish yesterday"	
32	Resource Management	"Bully, beg, borrow or steal, but get it done"	
33	Budgeting and Cost Management	"Make sure you get the cheapest offer and the highest quality"	
34	Change Control	See 30!	
35	Earned Value Management	"Give me results not sums"	
36	Information Management	"Put my name as author on all of the documents"	
4	**Technical Design**		
40	Design, Implementation and Handover Management	"I want you to get started immediately, we can always adjust the course on the way"	
41	Requirements Management	See 30	
42	Estimating	"Provide me with numbers that will get the project accepted"	
43	Technology Management	"Just make it work and that will do. The support group are paid to keep it working"	
44	Value Engineering	"If I want it, it's worth doing"	
45	Modelling and Testing	"Don't waste your time on toys, I want the finished article."	
46	Configuration Management	"That's nothing to do with us – administration is for administrators"	
5	**Commercial**		
50	Business Case	"I want it"	
51	Marketing and Sales	"If they can't sell it they are plain incompetent"	
52	Financial Management	"Make the figures look good"	
53	Procurement	See 33	
54	Legal Awareness	"If you can't hammer on the law, hammer on the table"	
6	**Organisational**		
60	Life Cycle Design & Management	"Go straight to the kill"	
61	Opportunity	"I'm telling you I want it. Now who is stupid enogh to disagree?"	
62	Design and Development	"When are you going to do some real implementation work?"	
63	Implementation	"Get on with it!"	
64	Hand-Over	"Take it – or take heat from me"	
65	(Post) Project Evaluation Review	"Of course it was good, I was involved"	
66	Organisation Structure	"There's me, and then the people who have to do what I say"	
67	Organisation Roles	"When I say jump, you'll all jump!"	
7	**People**		
70	Communication	"Watch my lips! I can always say it louder or more forcefully"	
71	Teamwork	"If anything goes wrong you'll all suffer"	

	Topic	Management response	Score
72	Leadership	"I've read that kidnap victims learn to love their tormentor. I've found that it works every time on my projects"	
73	Conflict Management	"I can beat anyone in this darn place"	
74	Negotiation	See 73	
75	Personnel Management	"I always say 'People are our key asset'. Luckily, you can always trade-in old assets for new ones"	

How to analyse your scores

Basically, the more macho the organisation, the further below Level 1 it is. Look down the table below and use the first criterion that applies to the results of your survey.

Criterion	Indicator	Analysis	Condition	Comments
One or more **a**'s	Average score divided by 3	An indicator value higher than 75% indicates *psychotic* behaviour	Level –3: Psychotic	Watch your back if you are thinking of publishing the assessment
		An indicator value of 75% or less indicates *antagonistic* behaviour	Level –2: Antagonistic	This will probably be considered flattering by your organization ("we're lean and mean")
One or more **b**'s	Average score divided by 2	The indicator measures the degree of *obstructiveness*	Level –1: Obstructive	A set of processes will be defined in order to address the issues
One or more **c**'s	Average score	The indicator measures the degree of *incompetence*	Level 0: Incompetent	The assessment will probably get sent to a manager who will then lose it.
Only **d**'s	None	You are on your way towards maturity	Level > 0: No worse than chaotic	A random set of project managers will organize a meeting (without an agenda) to decide what to do about it

Table 3: Use this table to analyse the responses of the survey

Additional insight can be gained by assessing categories of topics separately and then comparing them (e.g. *incompetent* in Strategy and *antagonistic* towards Control).