Agile project management

Content

- analogy
- elements of traditional project management
- elements of agile project management
- o conclusions

Karol Frühauf, *INFOGEM AG* CH-5401 Baden

Karol.Fruehauf@infogem.ch www.infogem.ch www.bridgeguard.org

Analogy for traditional planning



Route planer to Prague

A1 E60 Turn left: A1 / E60 towards: Zürich 126km

Display map

Roadworks

Passing close to **Zürich** 5km 00h07

Head towards: Exit 59

E41

Sankt Gallen Flughafen Nordring-Zürich

Urdorf

http://www.viamichelin.co.uk/viamichelin/gbr/dyn/controller/Driving directions

Traditional project plan

' l 🙃	Task Name	Start	Finish	tescuro Names	Lead	Pred	Succ	Duration	Work	960	Process	Resource Initials	11114
	ASI42 - Argus Safety and Insight 4.2	03.07.08	26.05.08	-4411108				495.02 d	14'119.72 h	0%	$\overline{}$		1111
- "	Milestones Planning Phase	27.09.08	24.07.07					213.75 d	0 h	0%			
_	External Dependencies	11.09.08	27.10.08					34 d	0 h	0%			
,	Project Deliverables during Planning Phase	17.10.08	20.08.07					218.25 d	0 h	0%			
7	Milestones Execution Phase	16.01.08	26.05.08					92.28 d	0 h	0%			
,	Pre-Project (Mandate Creation to Approval)	03.07.06	27.09.06					62.88 d	424.5 h	0%			
16	Proposal is confirmed in CPS and all relevant data is available	03.07.06	03.07.06				86	0.6	0 h				03.07
, T	Define Business Case & Develop Draft Mandate	03.07.06	25.07.06					17 d	209 h	0%			¥
4	Define Project Approach	11.07.08	21.08.06					29.13 d	64 h				∀ ~~~
4	Plan Project	03.00.06	18.09.05					32,25 d	144 h	0%			┤ ▘▃
2	Obtain Approval	18.09.06	27.09.06					7.5 d	7.5 h	0%			ļ —
8	Project Mandate approved	27.09.08	27.09.06		PM	137	248;24	0.6	0 h				
9	Project Management - Planning Phase	03.07.06	20.08.07			-	-	295.13 d	1'783 h	0%			
0	Pre-Planning Phase activities (Incl. Kick-off Meeting)	27.09.08	17.10.08					13.5 d	67 h				
8	Project Ready to Start	17.10.08	17.10.08		PM	147	289;15	0.6	0 h	4.74			-
9	Plan & Organize Project (POP) - For Execution Phase	01.03.07	20.08.07					121.67 d	326 h				-
8	Project Ready to Start Execution	20.08.07	20.08.07			177;182;	26568	0.6	0 h				-
9	Identify Execution Partner/Develop Contract	17.10.08	27.07.07			177,100,	2000	203.25 d	170 h				-
5	Pre-Requisite: Functional Specs are final	08.05.07	08.05.07			708	193	0.6	0 h				-
1	Prepare External Partner selection (Test Support & Issue tracking)	17.10.08	31.05.07				.00	161.83 d	52 h				
5	External partner selection prepared	31.05.07	31.05.07			200 204		0.000	0 h				
8	Approach external partners (Test Support & Releys)	09.04.07	21.08.07			220,207		53.71 d	36 h				_
3	Conduct evaluation (Test support & Issue tracking)	17.10.08	18.07.07					196,25 d	74 h				_
8	Partner selected/Ready approve SOW.	18.07.07	18.07.07			238	174;24	04	0 h				
9	Finalize Contract	24.07.07	27.07.07			230	174;26	3 d	8 h				_
_							0.4550						
5	Contracts effective	27.07.07 10.08.07	27.07.07			241;242;2 244FS+2	245FS	04	O h				
_						2447542							
100		27.09.08	11.04.07					140 d	1'220 h				
2	Planning phase completed	20.00.07	12.05.08					0 d	0 h 1407.4 h				03.07
	Project Management - Execution Phase							1111					
9	Solution Delivery - Planning Phase	26.09.08	24.05.07					172.46 d	6742.6 h				
_	Analysis & Conceptual Design (A&C) CIH	26.09.08							6742.6 h				
<u> </u>		17.10.08	17.01.07					65.83 d	2'026 h				
	Review and Document Present Status	17.10.08						13 d	429 h				
3	Review present business state	17.10.08	27.10.08					8 d	171 h				
4	Current Business State Identified	27.10.08	30.10.08		BA	284,285;2	324;32	1 d	0 h				
5	Review present technology state	17.10.08	30.10.08					9 d	230 h				
8	Document present technology	17.10.08	20.10.08					3 d	32 h				
	Current technology documented	20.10.08	20.10.08		SA	297;298;	311;42	0.6	0 h				
2 🕺		17.10.08	30.10.08					9 d	196 h				
0	Present application & Interfaces documented	30.10.08	30.10.06		8A	303,304;		0.6	0 h				
	Present Technology state identified	30.10.08	30.10.08		SA	301;310		0.6	0 h				
2	Review system requirements for Argus 4.2	17.10.08	18.10.06				313;31	1 d	12 h			SA;BA1;BA2	
3	Create Draft Technical Requirements (Application, Data, Infrastru	30.10.08	03.11.06	ct[50%]		312,311;		4 d	16 h			SA	
4	Current Business & IT Environment identified and documented	03.11.06	03.11.06		PM	294,311;	400;41	0.6	0 h				
5	Develop & Document Business Requirements	17.10.08	06.01.07					57.83 d	1'046.2 h				
6	Prepare Business Requirements documentation	17.10.08	02.11.06					12 d	48 h	4.04			
1	Style guide for User Requirements Documentation ready for use	02.11.06	02.11.06		BA	320,319;	18,345	0 d	0 h	0%			
2 😥	Develop 1st Draft-proposal for Future Business (Process/Rol	30.10.06	16.11.05					13.33 d	106 h	0%			

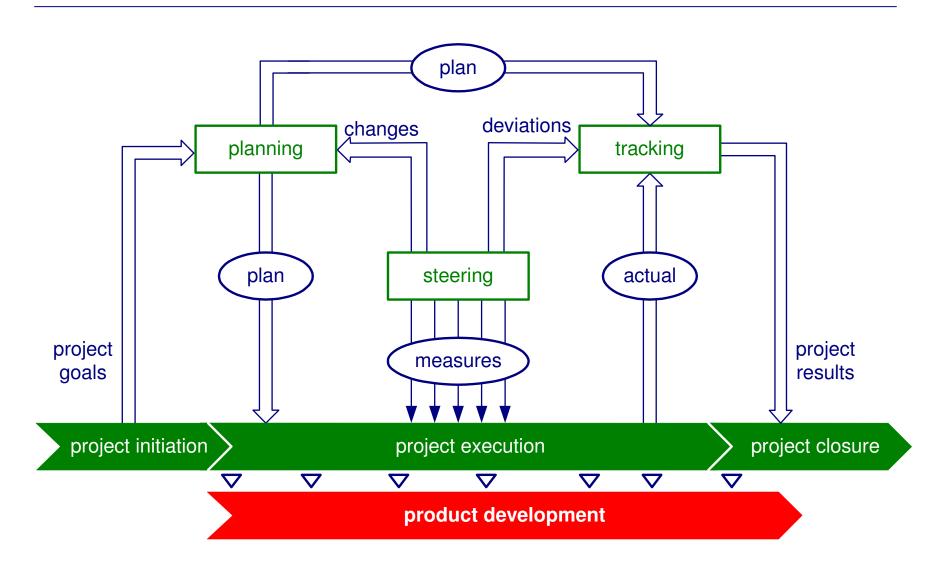
Traditional strategy: Follow the plan

plan and implement the plan

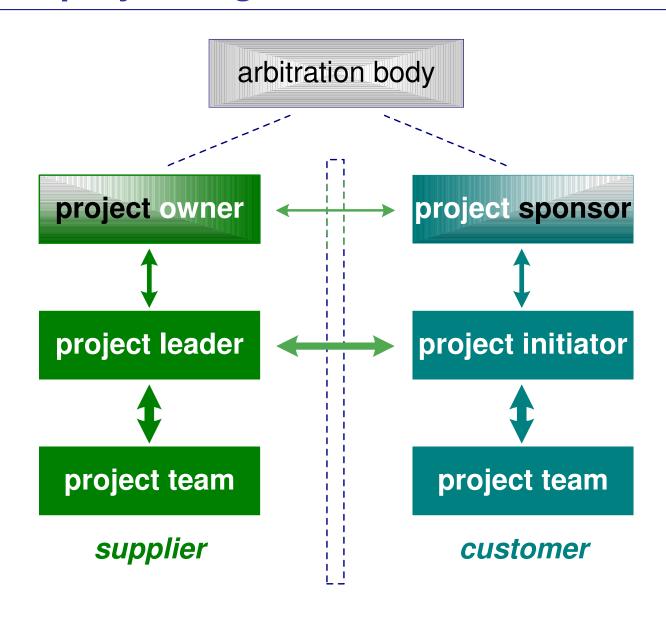


deviations from plan are mistakes that must be corrected

Traditional project life-cycle



General project organisation model



Responsibilities (traditional)

project initiator (customer)

 for fitness for use of the product, i.e. quality and priority of product requirements

project leader (supplier)

- for protecting project interests
- for achieving the project goals (deadline, cost, requirements conformance)

project owner (and sponsor)

- o for protecting the interests of his / her organisation
- ofor reconciling the organisation's and project's interests

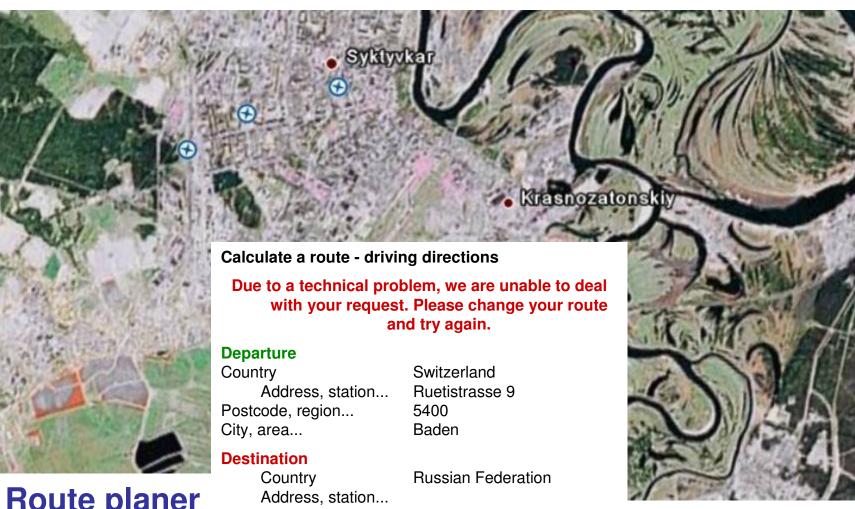
project team members

for the quality of their work products

arbitration body

o for reconciling the interests of both, the customer and supplier

Analogy for agile planning



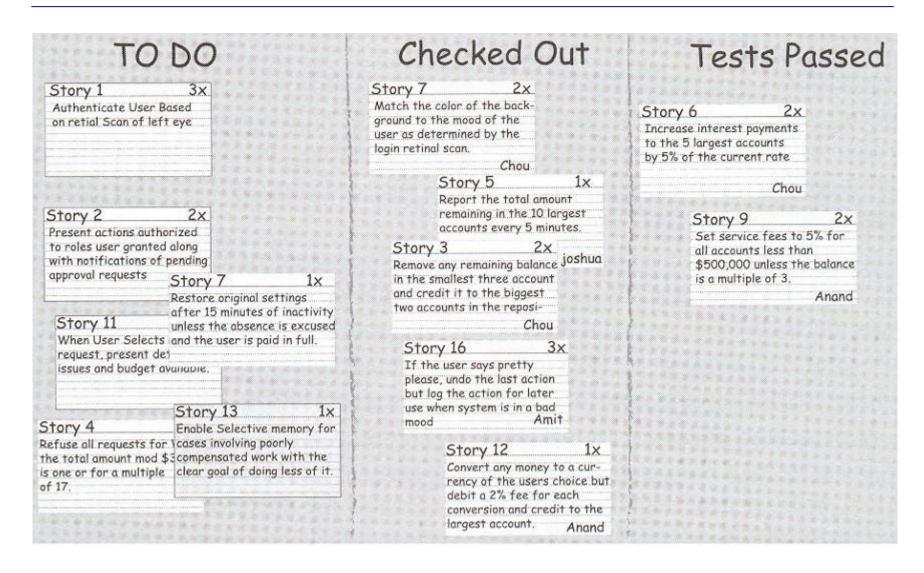
Route planer to Siberia

Address, station...
Postcode, region...

City, area... Syktyvkar

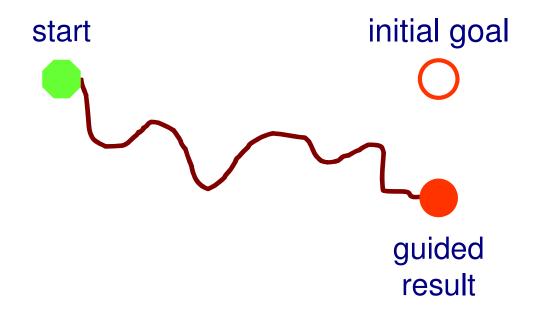
picture from Google Earth

Agile project planning



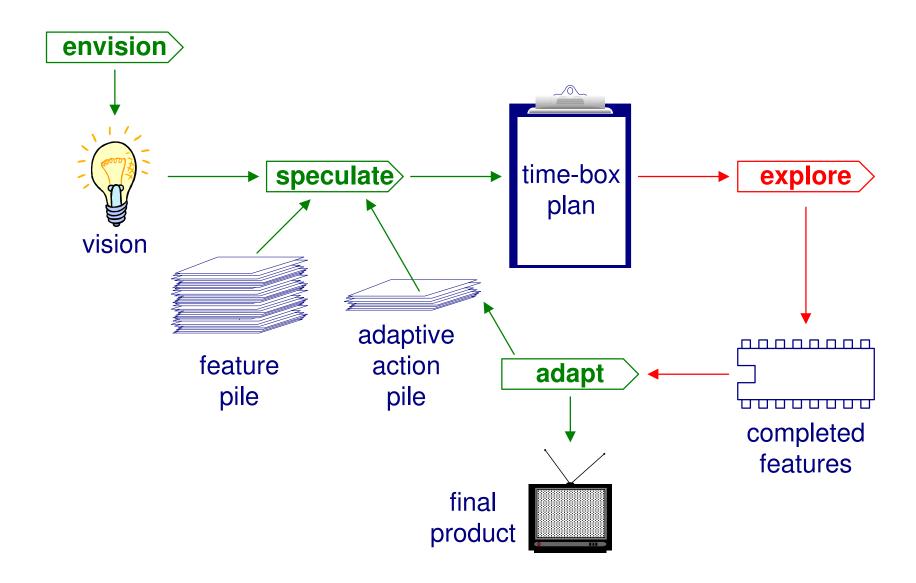
Agile Strategy: Guide the development

expect to end up at different spot than initially envisaged even though you don't know where it is

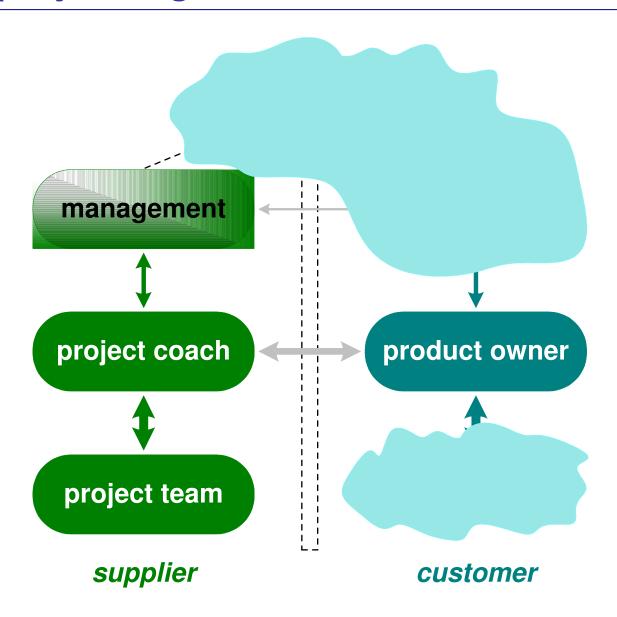


deviations guide us toward the correct solution

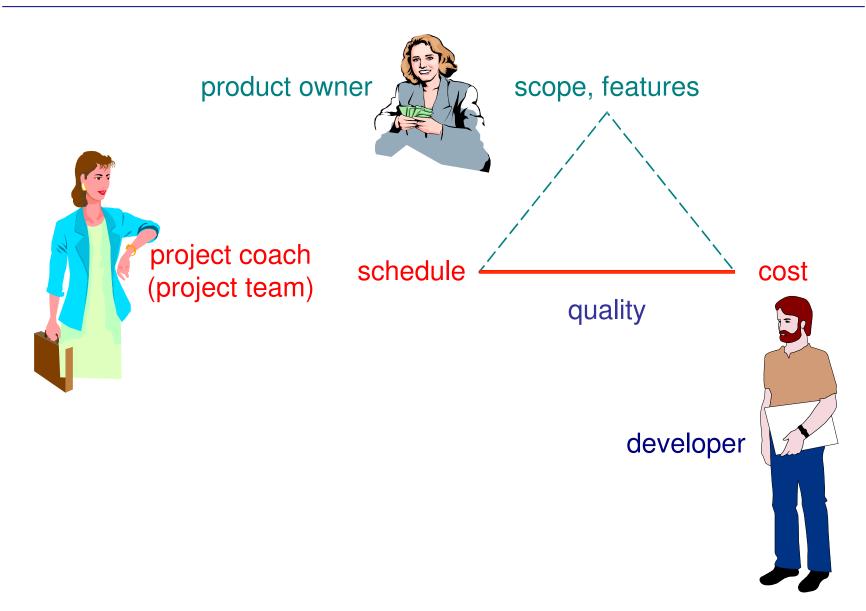
Agile Project Life Cycle



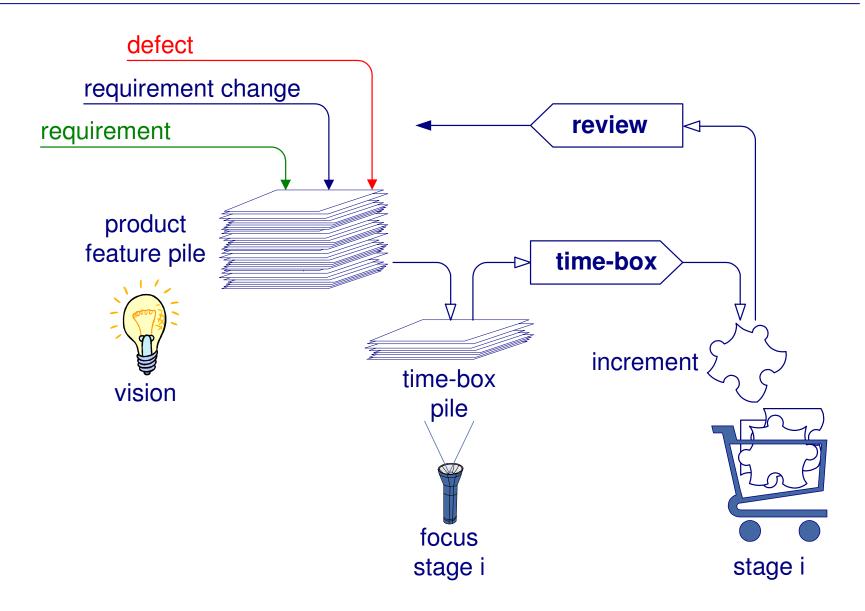
Agile project organisation model



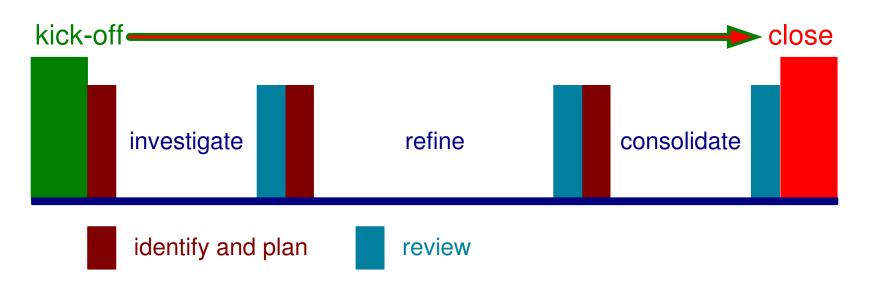
Responsibilities (agile)



Development in increments



Characteristics of the time-box

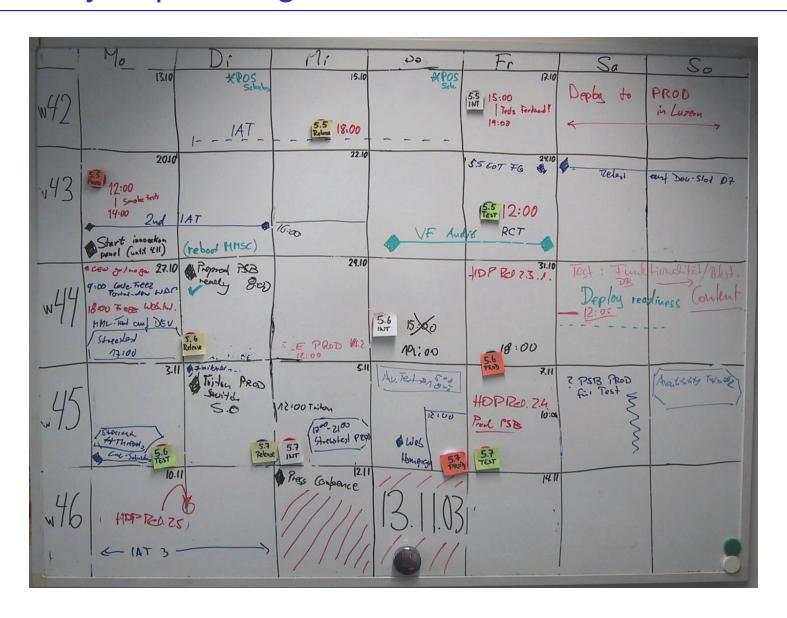


- defined period of time
- whole team focused on time-box work
- constant capacity during the time-box
- balance between workload and capacity
- tasks delivering the greatest value in the next time-box
- project coach takes care of all problems, barriers, and disruptions
- management helps to get rid of the obstacles

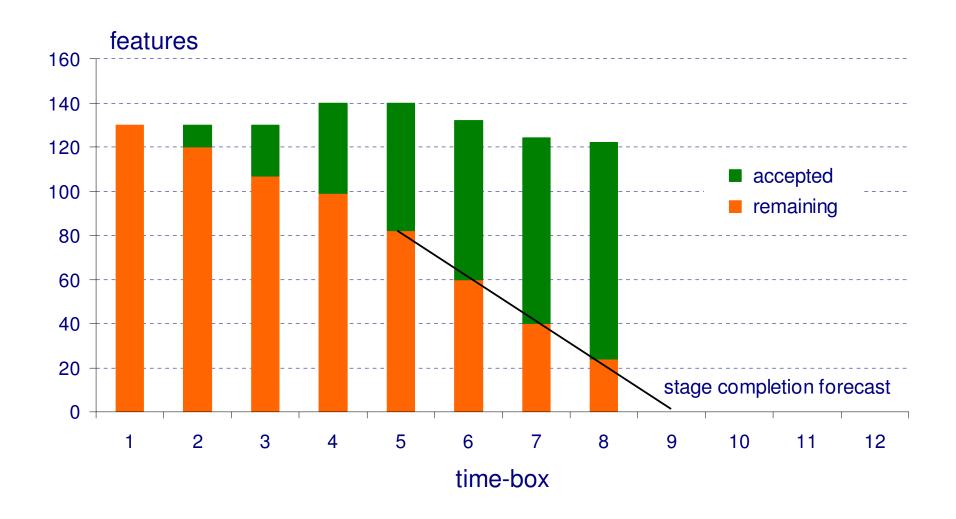
Daily stand-up meeting



Visibility of planning: Final count-down



Visibility of progress: Burn-down diagram



Conclusions: Mental model

traditional

- project execution can be standardised
- customer involvement is unlikely
- requirements need to be defined to a large extent up front
- it takes time to make something the customer can have an intelligent judgement on

agile

- no two projects will ever be the same
- customer involvement is critical
- only architecture relevant requirements need to be known "entirely" up front
- do first whatever enables the customer to have an intelligent judgement on

Conclusions: Principles

traditional

- management oriented
- deadline minded
- sum of individuals
- collaboration via meetings
- responsibility for processes
- communication via documents
- change resistant
- focus on safeguards
- o go, go, go

agile

- technology oriented
- result, quality minded
- 。 team
- continuous working in team
- responsibility for tasks
- mainly face-to-face communication
- change tolerant
- focus on simplicity
- feedback, feedback, feedback

The Conclusion

future is always fuzzy

- ⇒ don't plan in too much detail too much ahead
- innovation projects are a discovery journey
- ⇒ utilise the creativity of an empowered team
- territory you'll cross in innovation projects is shaky
- ⇒ apply frequent checks
- the journey of innovation projects is full of surprises
- ⇒ be flexible! (John Elgar)



Literature

- Beck, Kent: Extreme Programming Explained Embrace Change.
 Addison-Wesley, 2005, ISBN 0-321-27865-8
- Burghardt, Manfred: Projektmanagement, Leitffaden für die Planung,
 Überwachung und Steuerung von Entwicklungsprojekten.
 Siemens AG, Publicis MCD, 1995, 3rd edition ISBN 3-89578-035-9
- Frühauf, K.; Ludewig, J.; Sandmayr, H.:
 Software-Projektmanagement und -Qualitätssicherung.
 vdf Verlag der Fachvereine, 2002, 4th edition, ISBN 3 7281 2822 8
- Highsmith, Jim: Adaptive Software Development.
 Dorset House, 2000, ISBN 0-932633-40-4
- Highsmith, Jim: Agile Project Management Creating Innovative Products.
 Addison-Wesley, 2004, ISBN 0-321-21977-5
- Larman, Craig: Agile & Iterative Development A Manager's Guide.
 Addison-Wesley, 2004, ISBN 0-13-111155-8
- Schwaber, Ken: Beedle, Mike: Agile Software Development with Scrum.
 Prentice Hall, 2001, ISBN 0-13-067634-9