

CHOPPING DOWN TREES VS. SHARPENING THE AXE - BALANCING THE DEVELOPMENT OF BPM CAPABILITIES WITH PROCESS IMPROVEMENT

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Investment in BPM vs. Investment in Process Improvement

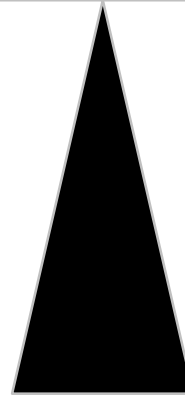
SHARPENING THE AXE

Investment in
BPM Capabilities

Factors					
Strategic Alignment	Governance	Methods	Information Technology	People	Culture
Process Improvement Planning	Process Management Decision Making	Process Design & Modelling	Process Design & Modelling	Process Skills & Expertise	Responsiveness to Process Change
Strategy & Process Capability Linkage	Process Roles and Responsibilities	Process Implementation & Execution	Process Implementation & Execution	Process Management Knowledge	Process Values & Beliefs
Enterprise Process Architecture	Process Metrics & Performance Linkage	Process Monitoring & Control	Process Monitoring & Control	Process Education	Process Attitudes & Behaviors
Process Measures	Process Related Standards	Process Improvement & Innovation	Process Improvement & Innovation	Process Collaboration	Leadership Attention to Process
Process Customers & Stakeholders	Process Management Compliance	Process Program & Project Management	Process Program & Project Management	Process Management Leaders	Process Management Social Networks
Capability Areas					

Rosemann and vom Brocke (2010)

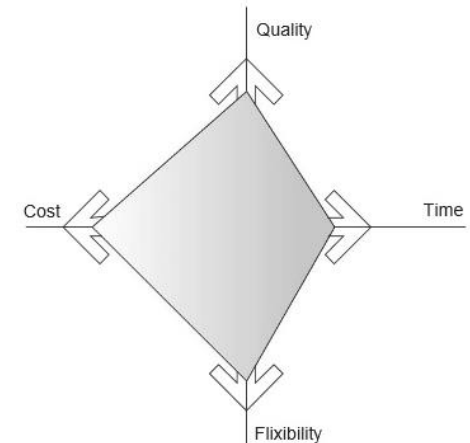
BPM capability



How to balance this over time?

CHOPPING DOWN TREES

Investment in
Process Improvement



Reijers and Liman Mansar (2005)

Devil's Quadrangle

Infrastructure character of investment in BPM

Investment in BPM
Capabilities increase...

- ...the basic functioning of an organization
- ...the ability to integrate, build, and re-configure processes
- ...the effectiveness and efficiency in a long term perspective

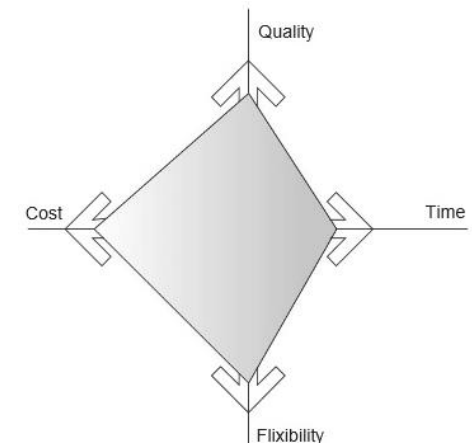
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Single-process perspective of investment in process improvement

Investment in
BPM Capabilities

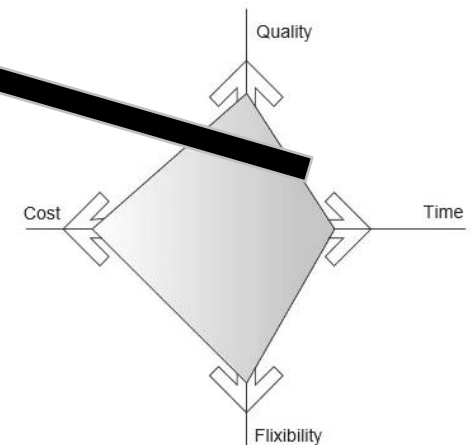
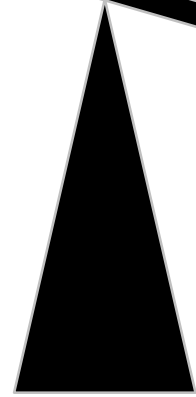
Investment in
Process Improvement increase ...

...a distinct process in terms of
time, cost, quality, and flexibility
...the effectiveness and efficiency
in a short term perspective

Factors					
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Rosemann and vom Brocke (2010)

BPM capability

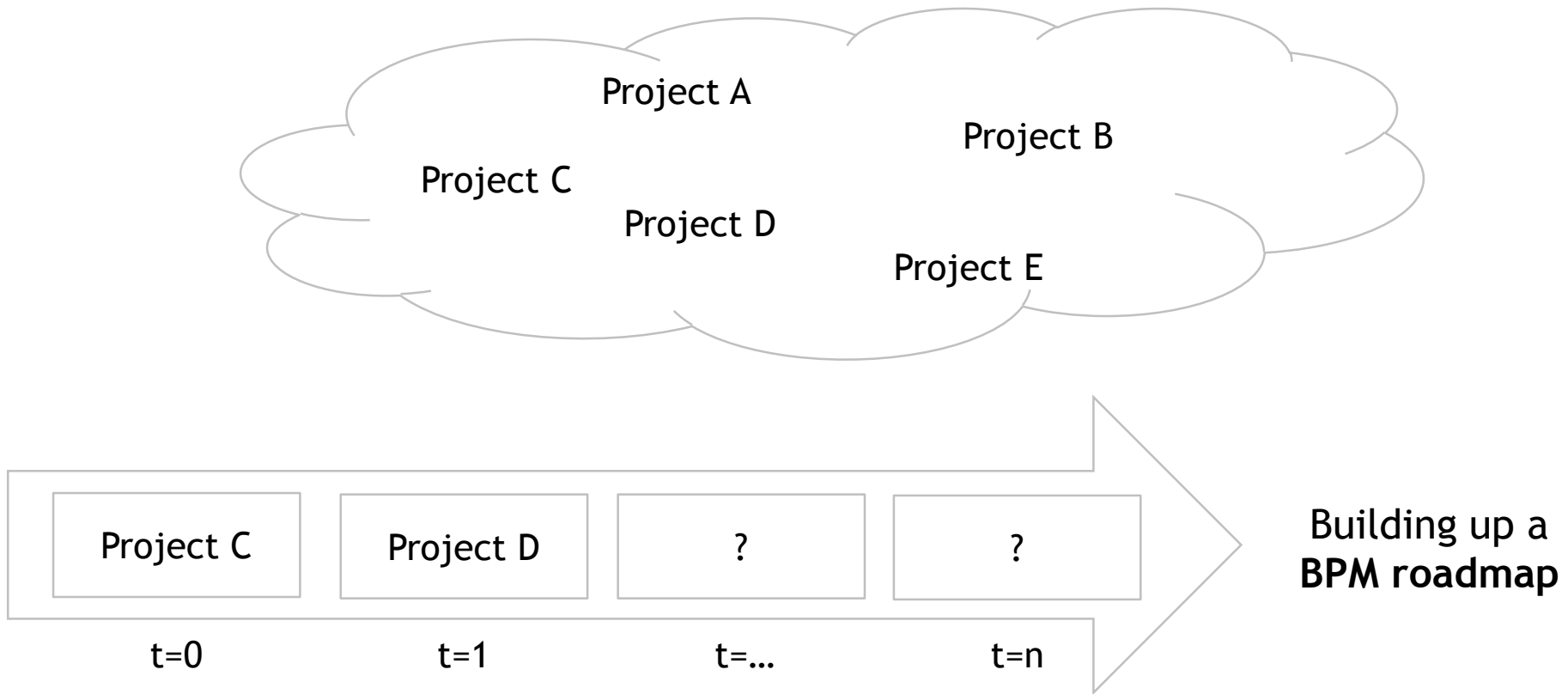


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Devil's Quadrangle

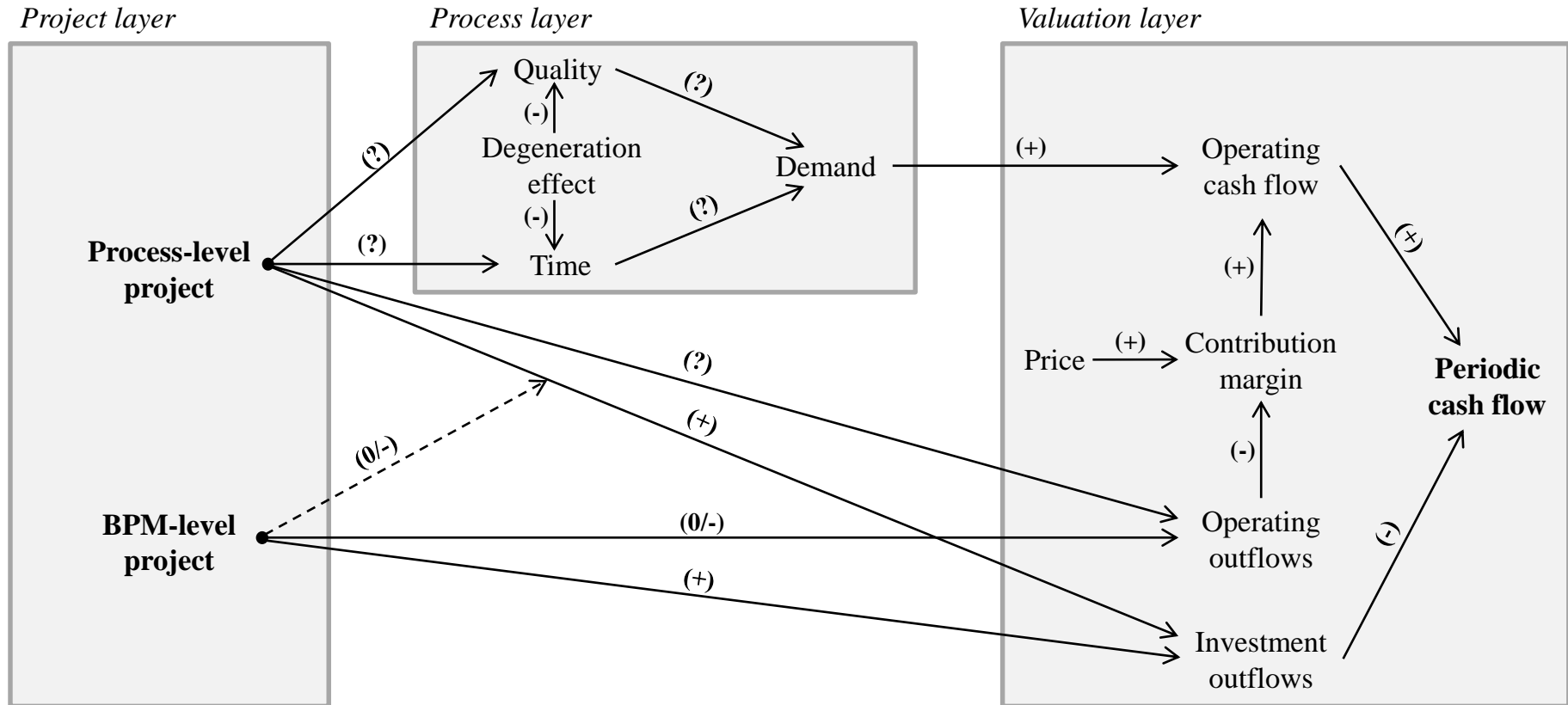
How to balance this over time?

Which projects need to be implemented in which order?



Which projects should an organization implement and in which order should it implement these projects to balance the development of BPM capabilities with the improvement of individual business processes?

Projects and their effects



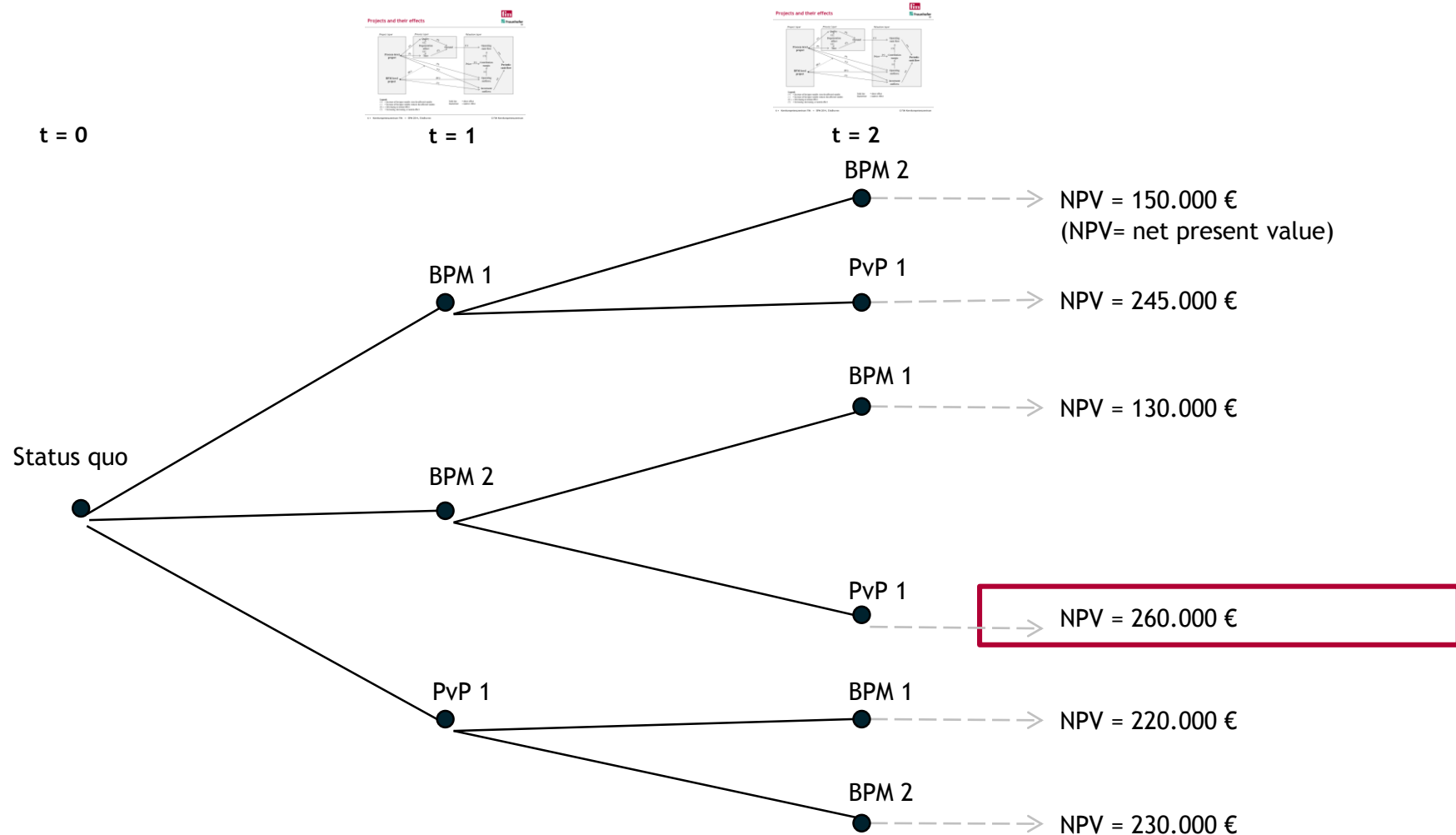
Legend:

- (+) = Increase of the input variable rises the affected variable
- (-) = Increase of the input variable reduces the affected variable
- (0/-) = Decreasing or neutral effect
- (?) = Increasing, decreasing, or neutral effect

- Solid line = direct effect
- Dashed line = indirect effect

Multi-period planning horizon of all processes

Example: An organization has three project opportunities (Two BPM-level projects (BPM1, BPM2) and one Process-level project (PvP1)). Planning horizon is two periods.



Demonstration Example

IT service processes considered in the demonstration example

<i>i</i>	Name	$q_{i,0}$	$t_{i,0}$	p	$O_{i,0}^{op}$	d_i, v_i	n_i
1	Incident management service	95 %	60 min	2.50 €	1 €	10.00 %	$11,000 \cdot (\ln q + e^{\frac{1}{t}})$
2	Operation of an ERP system	91 %	30 d	1,500 €	1,300 €	5.00 %	$200 \cdot (\ln q + e^{\frac{1}{t}})$
3	Backup service	80 %	-	220 €	150 €	5.00 %	$1,200 \cdot \ln q$

BPM-level and process-level projects considered in the demonstration example

<i>s</i>	Name	Services influenced	O_s^{inv}	a_s		b_s	
				pess.	opt.	pess.	opt.
1	Training in BPR methods	All	25,000 €	-	-	0.95	0.8
2	Development of a process performance measurement system	All	100,000 €	0.95	0.85	-	-
3	Training in Six Sigma	All	35,000 €	0.99	0.9	0.95	0.8

<i>s</i>	Name	<i>i</i>	O_s^{inv}	e_s		u_s		m_s	
				pess.	opt.	pess.	opt.	pess.	opt.
4	Update ticket system	1	110,000 €	0.90	0.70	1.0	1.1	1.3	1.1
5	Increase backup frequency	3	35,000 €	-	-	1.1	1.3	1.2	0.9

Demonstration Example

Results of the demonstration example

	8 periods	3 periods	8 periods	3 periods
Optimistic	Projects: 2, 3, 5, 1, 4	Projects: 2, 3, 1	Projects: 4, 1, 5, 3, 2	Projects: 4, 1, 2
	NPV: 7,892,429 €	NPV: 2,579,570 €	NPV: 6,307,772 €	NPV: 1,689,518 €
Pessimistic	Projects: 2, 3, 1, 4, 5	Projects: 2, 3, 1	Projects: 5, 4, 1, 3, 2	Projects: 5, 4, 2
	NPV: 4,828,230 €	NPV: 1,998,147 €	NPV: 3,805,124 €	NPV: 1,393,421 €
(a) Optimal BPM roadmaps			(b) Worst BPM roadmaps	

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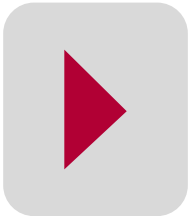
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Fazit, limitations, future research

Limitations for future research:

- Only one project can be implemented per period, therefore missing intra-temporal interactions
- No complex intra-temporal interactions (e.g., input-output interactions)
- The effects of some projects may be independent of the previously implemented projects; A circumstance that would make an additive linking necessary
- Additional case studies
- ...

This conference paper is not the end...



- ... it can be the starting point for more research in the intersection of traditional BPM research
- and BPM research that focuses on capability development
 - and research that focus on Project Portfolio Management