

Module Management Presentation

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Abstract

This module addresses the presentation of architectural issues to higher management teams.

Distribution

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version: 1.0



Embedded Systems
INSTITUTE

Simplistic Financial Computations for System Architects.

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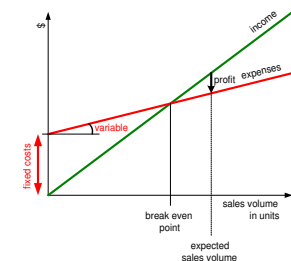
Abstract

This document explains how simple financial estimates can be made by system architects. These simplistic estimates are useful for an architect to perform sanity checks on proposals and to obtain understanding of the financial impact of proposals. Note that architects will never have full fledged financial controller know how and skills. These estimates are zero order models, but real business decisions will have to be founded on more substantial financial proposals.

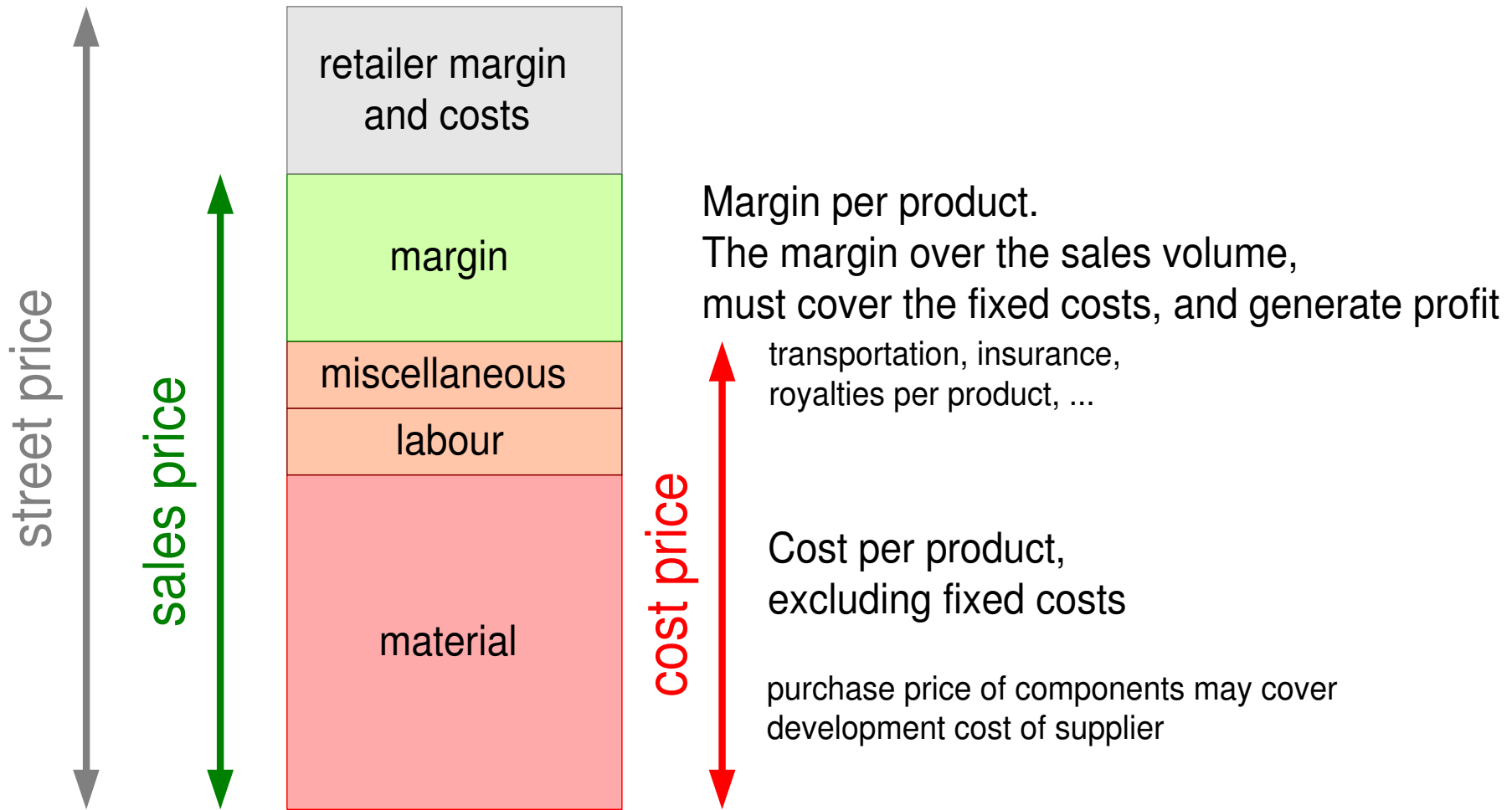
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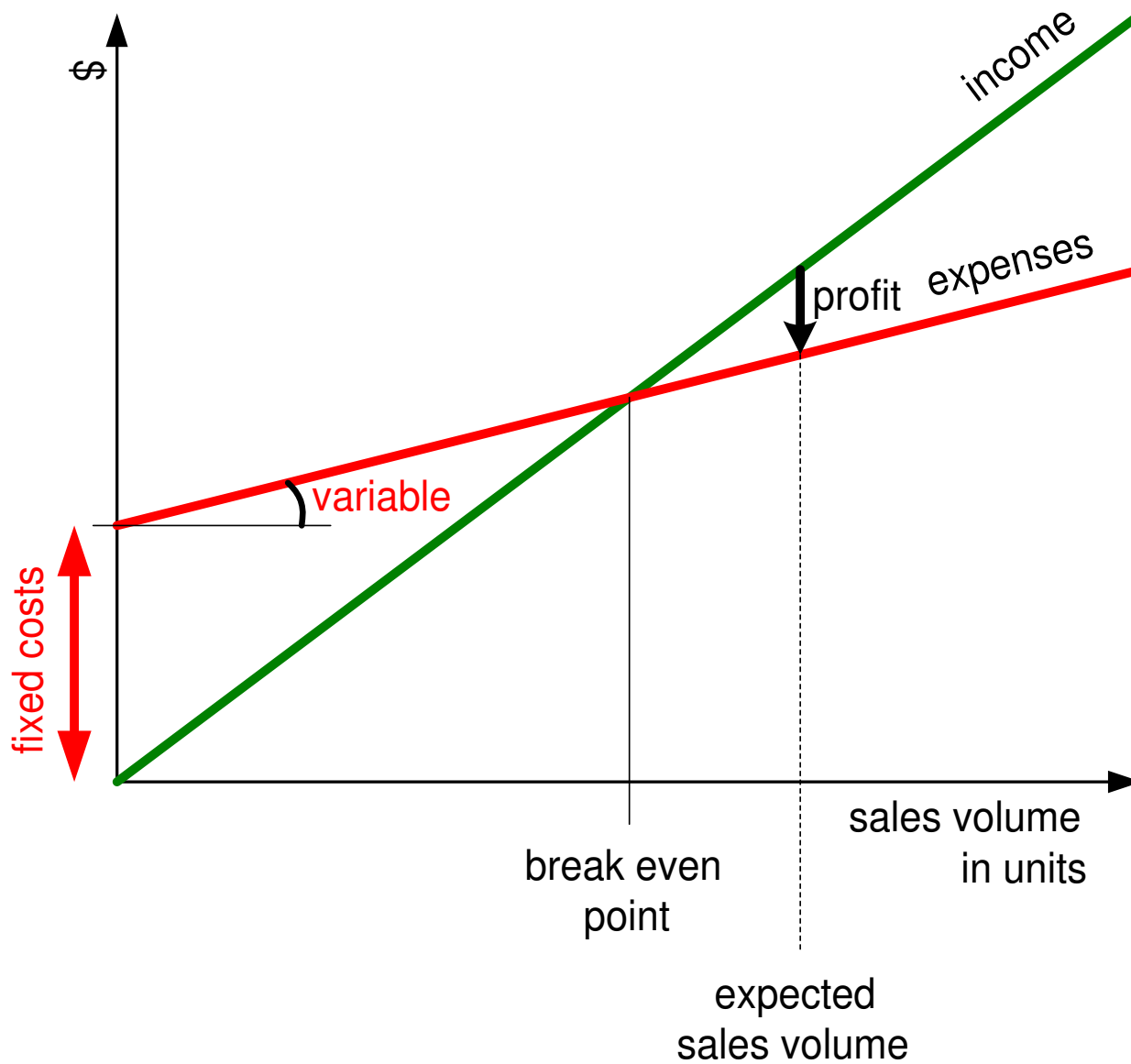
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Product Margin = Sales Price - Cost



Profit as function of sales volume



Investments, more than R&D



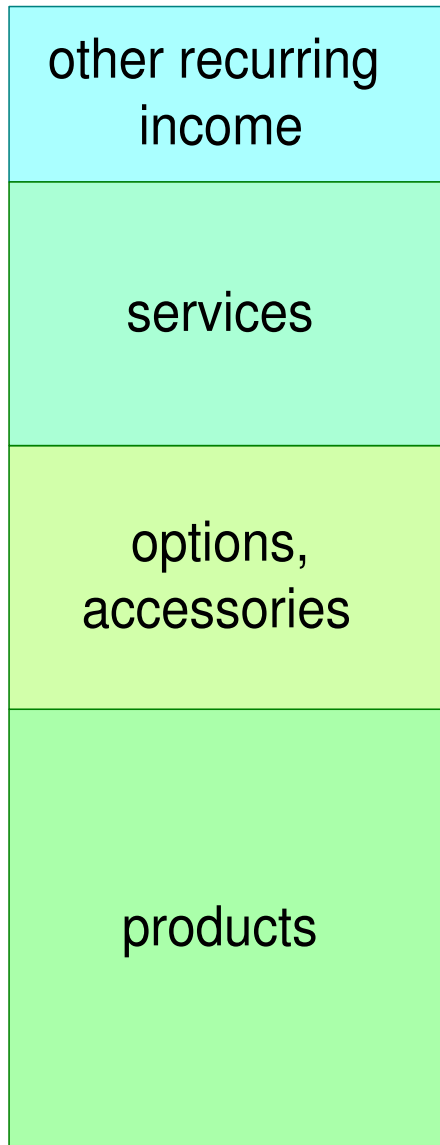
business dependent:
pharmaceuticals industry
sales cost >> R&D cost

strategic choice:
NRE or per product

including:
staff, training, tools, housing
materials, prototypes
overhead
certification

often a standard staffing rate is used
that covers most costs above:
 $R\&D\ investment = Effort * rate$

Income, more than product sales only



license fees
pay per movie

$$\sum_{\text{services}} \text{income}_{\text{service}}$$

content, portal updates
maintenance

$$\sum_{\text{options}} \text{sales price}_{\text{option}} * \text{volume}_{\text{option}}$$

$$\text{sales price}_{\text{product}} * \text{volume}_{\text{product}}$$

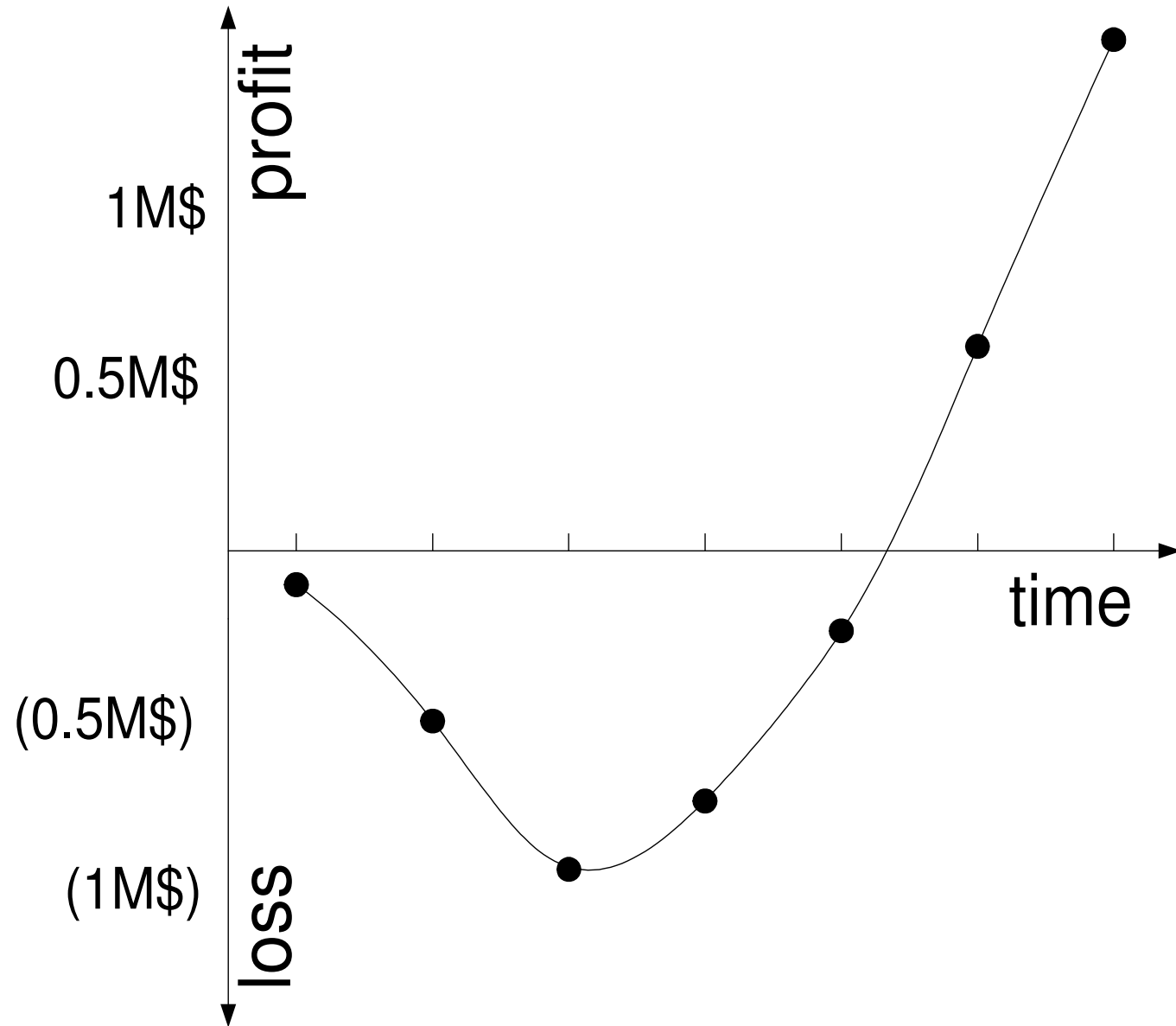
The Time Dimension

	Q1	Q2	Q3	Q4	Q1	Q2	Q3
investments	100k\$	400k\$	500k\$	100k\$	100k\$	60k\$	20k\$
sales volume (units)	-	-	2	10	20	30	30
variable costs	-	-	40k\$	200k\$	400k\$	600k\$	600k\$
income	-	-	100k\$	500k\$	1000k\$	1500k\$	1500k\$
quarter profit (loss)	(100k\$)	(400k\$)	(440k\$)	200k\$	500k\$	840k\$	880k\$
cumulative profit	(100k\$)	(500k\$)	(940k\$)	(740k\$)	(240k\$)	600k\$	1480k\$

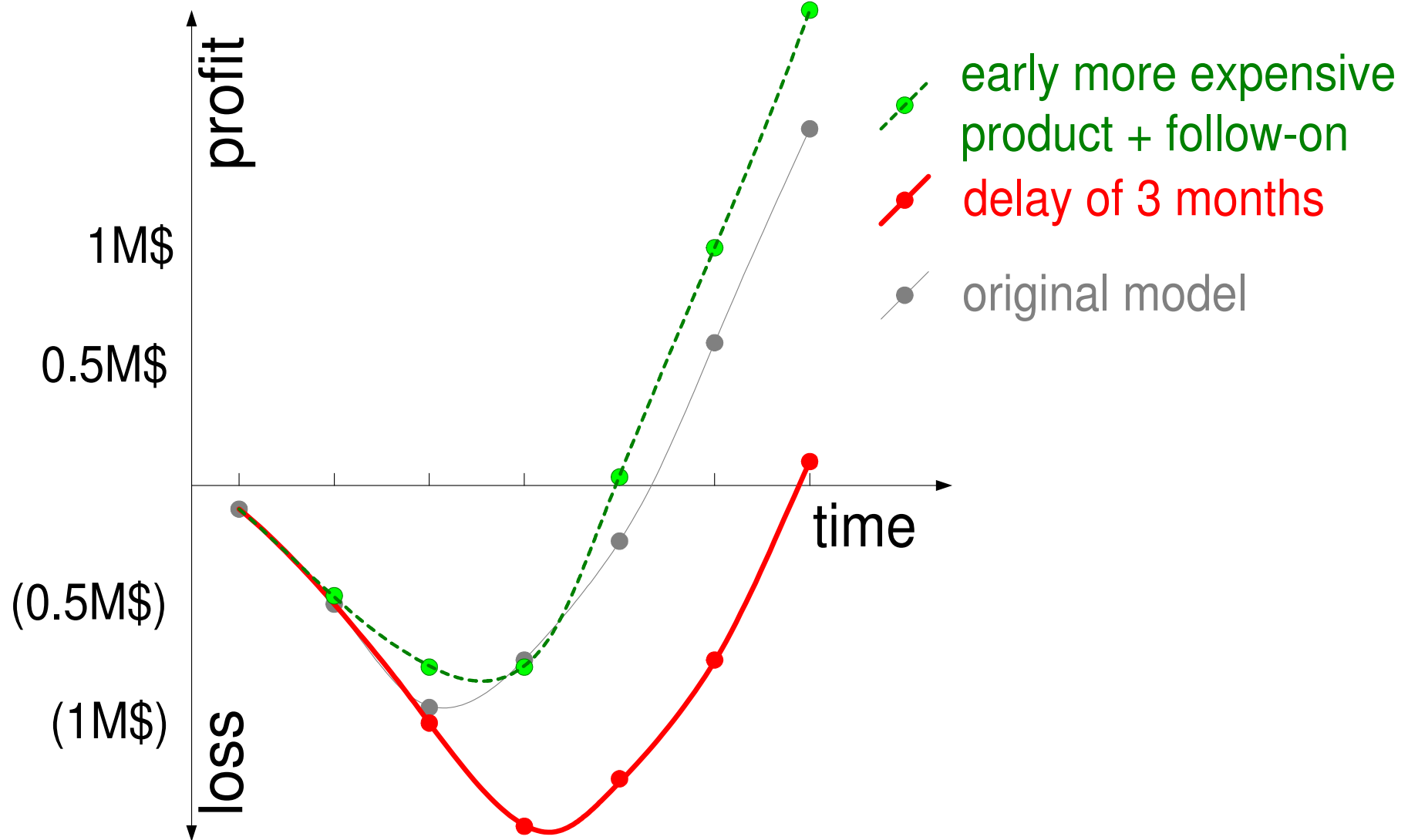
cost price / unit = 20k\$
sales price / unit = 50k\$

variable cost = sales volume * cost price / unit
income = sales volume * sales price / unit
quarter profit = income - (investments + variable costs)

The "Hockey" Stick



What if ...?



Fashionable financial yardsticks

Return On Investments (ROI)

Return On Net Assets (RONA) leasing reduces assets, improves RONA

turnover / fte outsourcing reduces headcount, improves this ratio

market ranking (share, growth) "only numbers 1, 2 and 3 will be profitable"

R&D investment / sales in high tech segments 10% or more

cash-flow fast growing companies combine profits with negative cash-flow,
risk of bankruptcy

How to present architecture issues to higher management

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Abstract

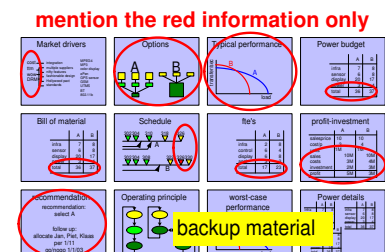
Architects struggle with their visibility at higher management echelons. The introvert nature of architects is a severe handicap. Participation of architects in management teams is important for balanced technical sound decisions and strategy. Improved managerial communication skills of architects are required.

This article describes how to give a more effective presentation to higher management teams. Subjects discussed are the preparation, content and form, do and don't advise.

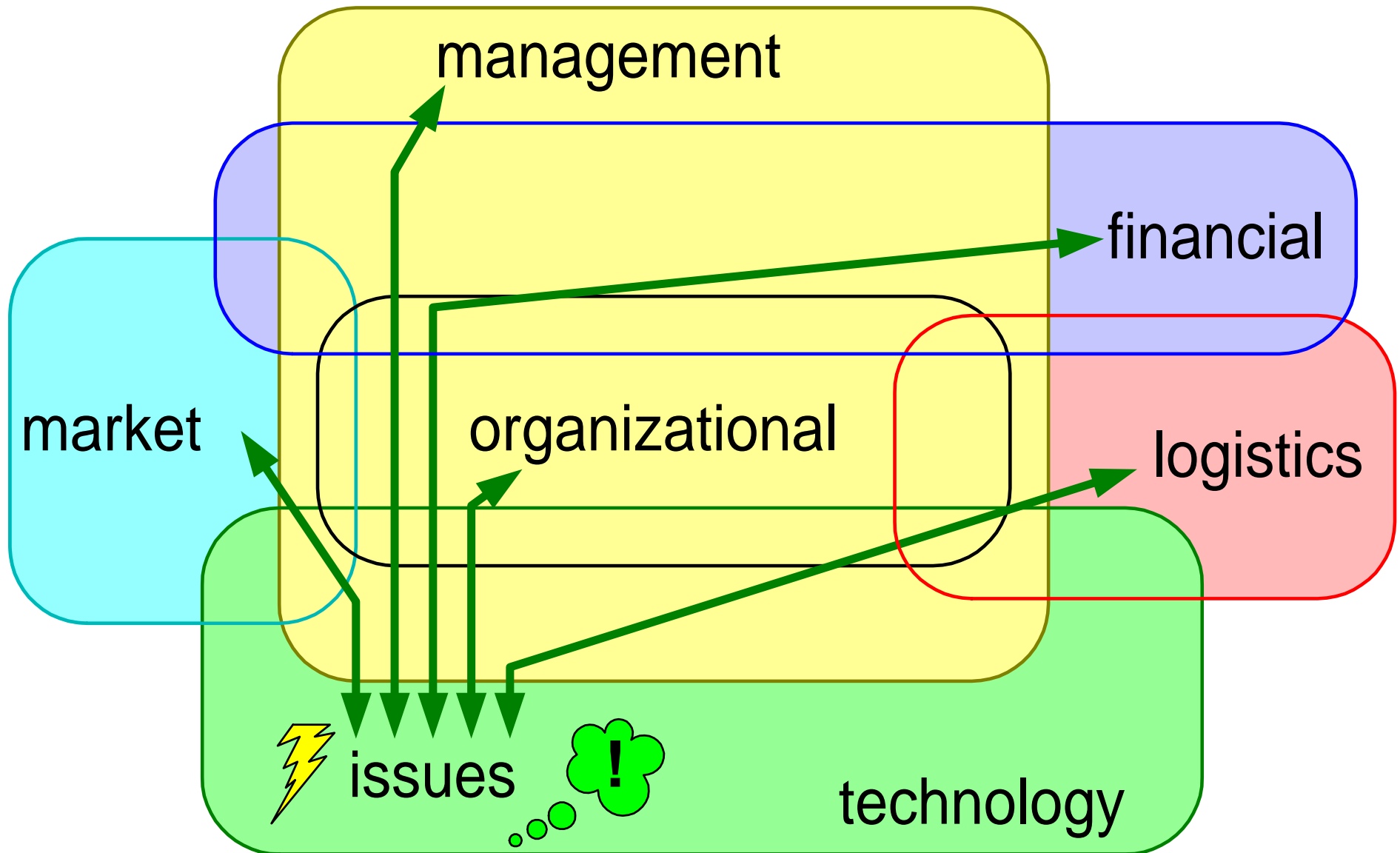
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Architectural issues related to managerial viewpoints



Characteristics of managers in higher management teams

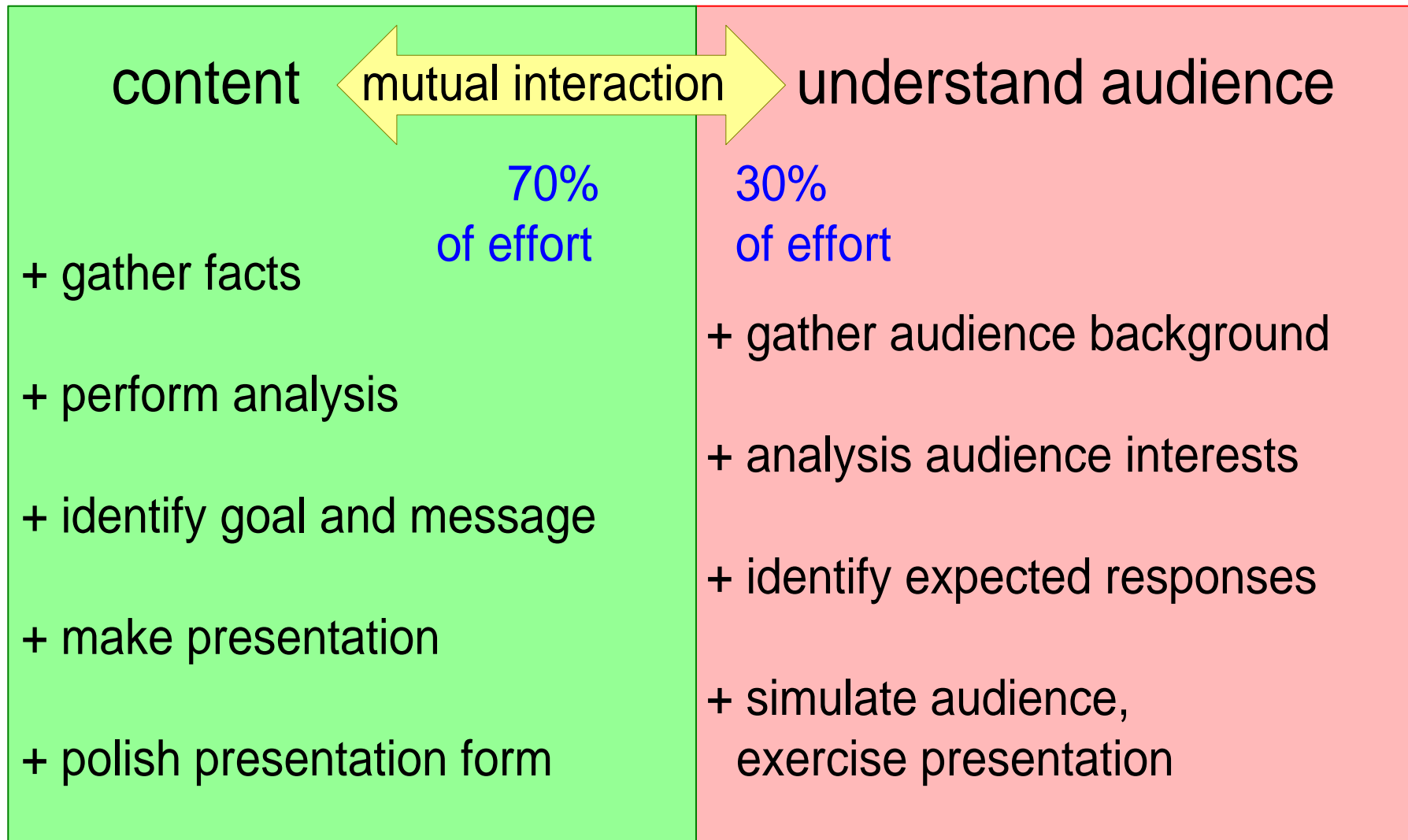
common characteristics

- + action-oriented
- + solution rather than problem
- + impatient, busy
- + want facts not beliefs
- + operate in a political context
- + bottom-line oriented:
profit, return on investment,
market share, etc.

highly variable characteristics

- ? technology knowledge
from extensive to shallow
- ? style from power play to
inspirational leadership

Always prepare with small team!



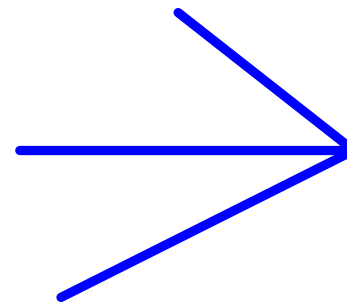
Recommended content

+ clear problem statement (what, why)

+ solution exploration (how)

+ options, recommendations

+ expected actions or decisions

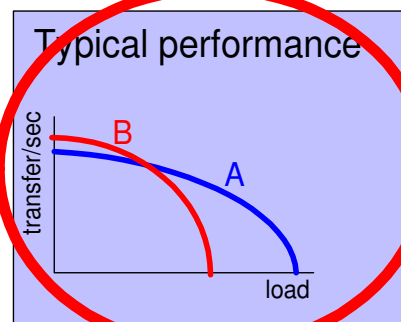
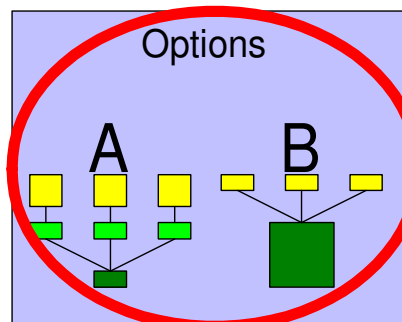


supported by
facts and figures

mention the red information only

Market drivers

cost	integration	MPEG4
ttm	multiple suppliers	MP3
WOW	nifty features	color display
DRM	fashionable design	ePen
	Hollywood pact	GPS sensor
	standards	GSM
		UTMS
		BT
		802.11b

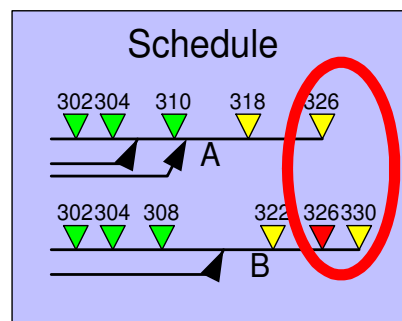


Power budget

	A	B
infra	7	8
sensor	6	8
display	20	17
power	3	4
total	36	37

Bill of material

	A	B
infra	7	8
sensor	6	8
display	20	17
power	3	4
total	36	37



fte's

	A	B
infra	2	8
control	6	4
display	6	8
and	3	2
total	17	23

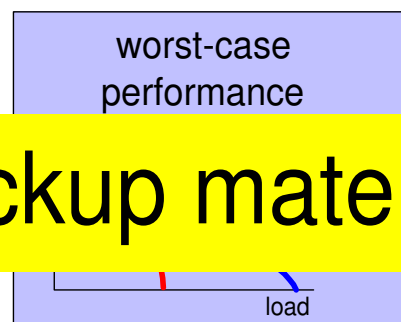
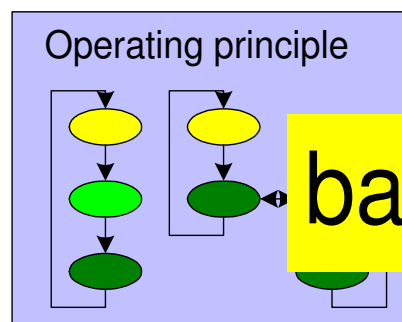
profit-investment

	A	B
salesprice	10	10
cost/p	3	4
units	1M	1M
sales	10M	10M
costs	3M	4M
investment	2M	3M
profit	5M	3M

recommendation

recommendation:
select A

follow up:
allocate Jan, Piet, Klaas
per 1/11
go/nogo 1/1/03



Power details

	A	B
infra	7	8
sensor	6	8
display	20	17
power	3	4
total	36	37

backup material

Form is important

poor form can easily distract from purpose and content

presentation material

- + professional
- + moderate use of color and animations
- + readable
- + use demos and show artifacts

presenter's appearance

- + well dressed
- + self confident but open

but stay yourself,
stay authentic

Don't force your opinion, understand the audience

do not

- preach beliefs
- underestimate technology knowledge of managers
- tell them what they did wrong
- oversell

do

- + quantify, show figures and facts
- + create faith in your knowledge
- + focus on objectives
- + manage expectations

How to cope with managerial dominance

do not

- let one of the managers hijack the meeting
- build up tensions by withholding facts or solutions
- be lost or panic at unexpected inputs or alternatives

do

- + maintain the lead
- + be to the point and direct
- + acknowledge input, indicate consequences (facts based)

Exercise presentation to higher management

- + Bring a clear **architecture message** to
- + a **Management team** at least 2 hierarchical levels higher
- + with **10 minutes** for **presentation including discussion**
(no limitation on number of slides)
- * architecture message =
technology options in relation with **market/product**
- * address the **concerns** of the **management stakeholders** :
translation required from **technology** issues into
business consequences (months, fte's, turnover, profit, investments)

Exercise schedule

