

# Module Management Presentation

by *Gerrit Muller* HBV-NISE

e-mail: `gaudisite@gmail.com`

`www.gaudisite.nl`

## Abstract

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

### Distribution

This article or presentation is written as part of the Gaudí project. The Gaudí project philosophy is to improve by obtaining frequent feedback. Frequent feedback is pursued by an open creation process. This document is published as intermediate or nearly mature version to get feedback. Further distribution is allowed as long as the document remains complete and unchanged.

October 20, 2017

status: draft

version: 1.1

# Simplistic Financial Computations for System Architects.

by *Gerrit Muller* HBV-NISE

e-mail: `gaudisite@gmail.com`

`www.gaudisite.nl`

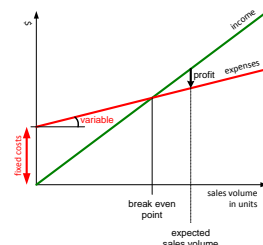
## Abstract

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.

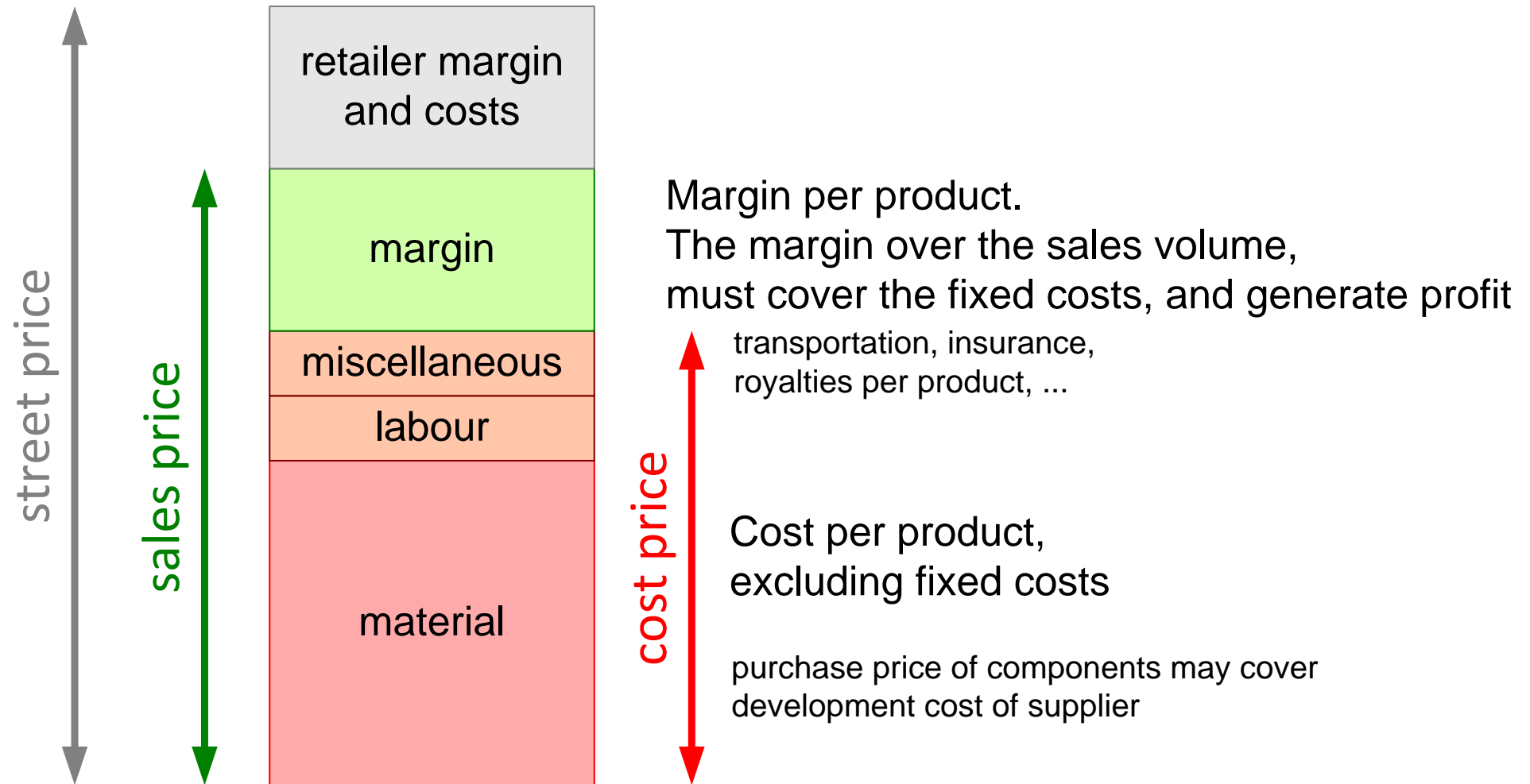
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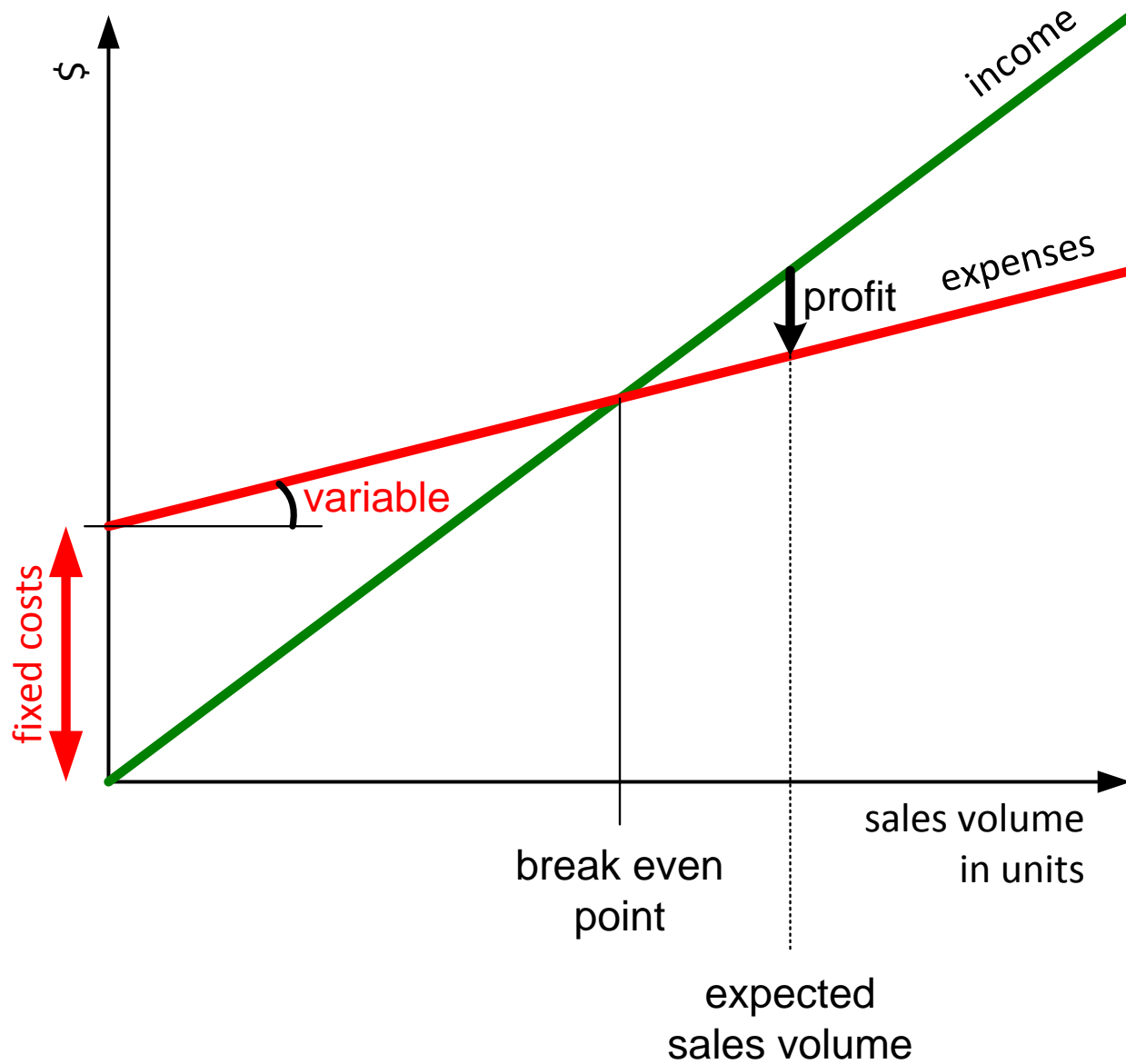
October 20, 2017  
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draft  
version: 1.3



# Product Margin = Sales Price - Cost



# Profit as function of sales volume



# Investments, more than R&D



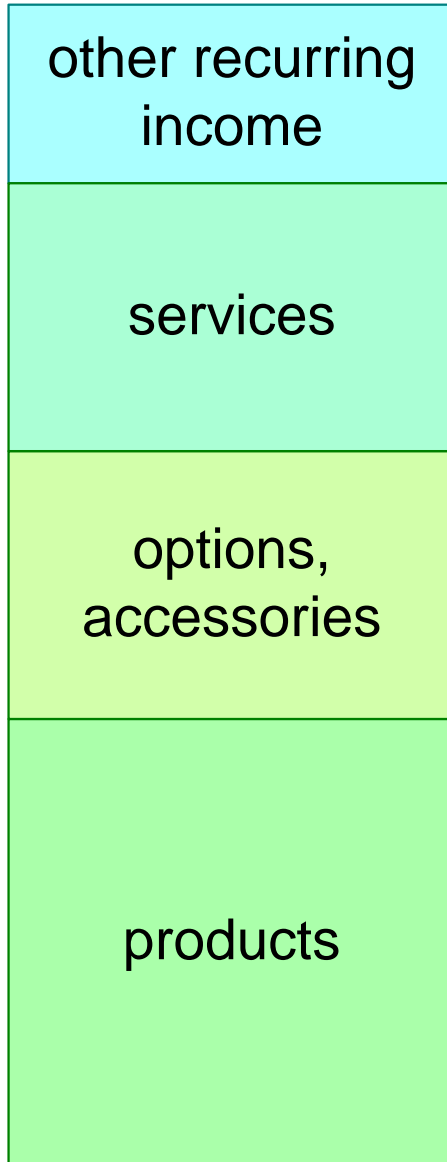
business dependent:  
pharmaceuticals industry  
sales cost >> R&D cost

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



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

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

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

license fees  
pay per movie

content, portal  
updates  
maintenance

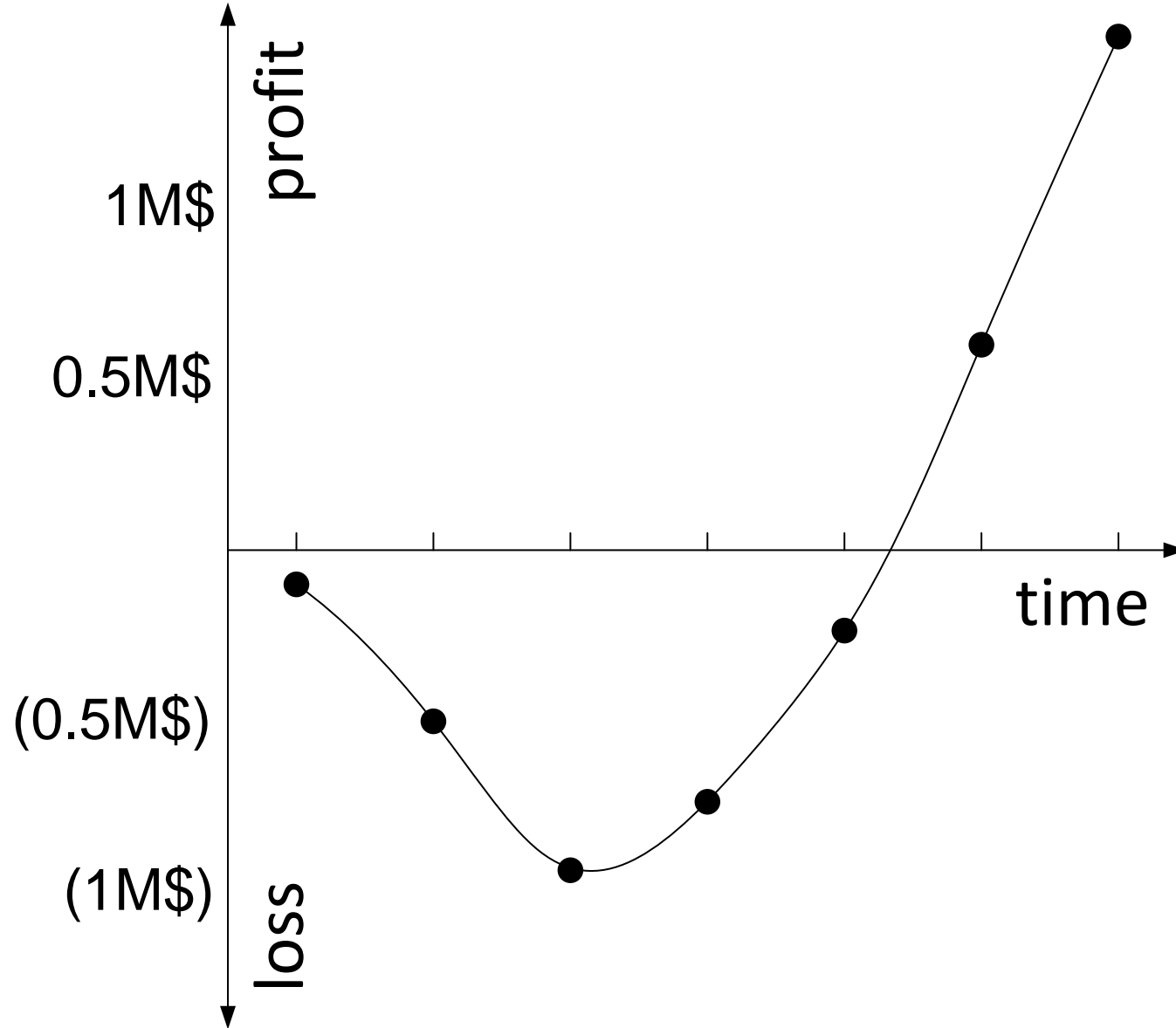
# The Time Dimension

	Q1	Q2	Q3	Q4	Q1	Q2	Q3
investments	100k\$	400k\$	500k\$	100k\$	100k\$	60k\$	20k\$
sales volume (units)	-	-	2	10	20	30	30
material & labour 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\$*

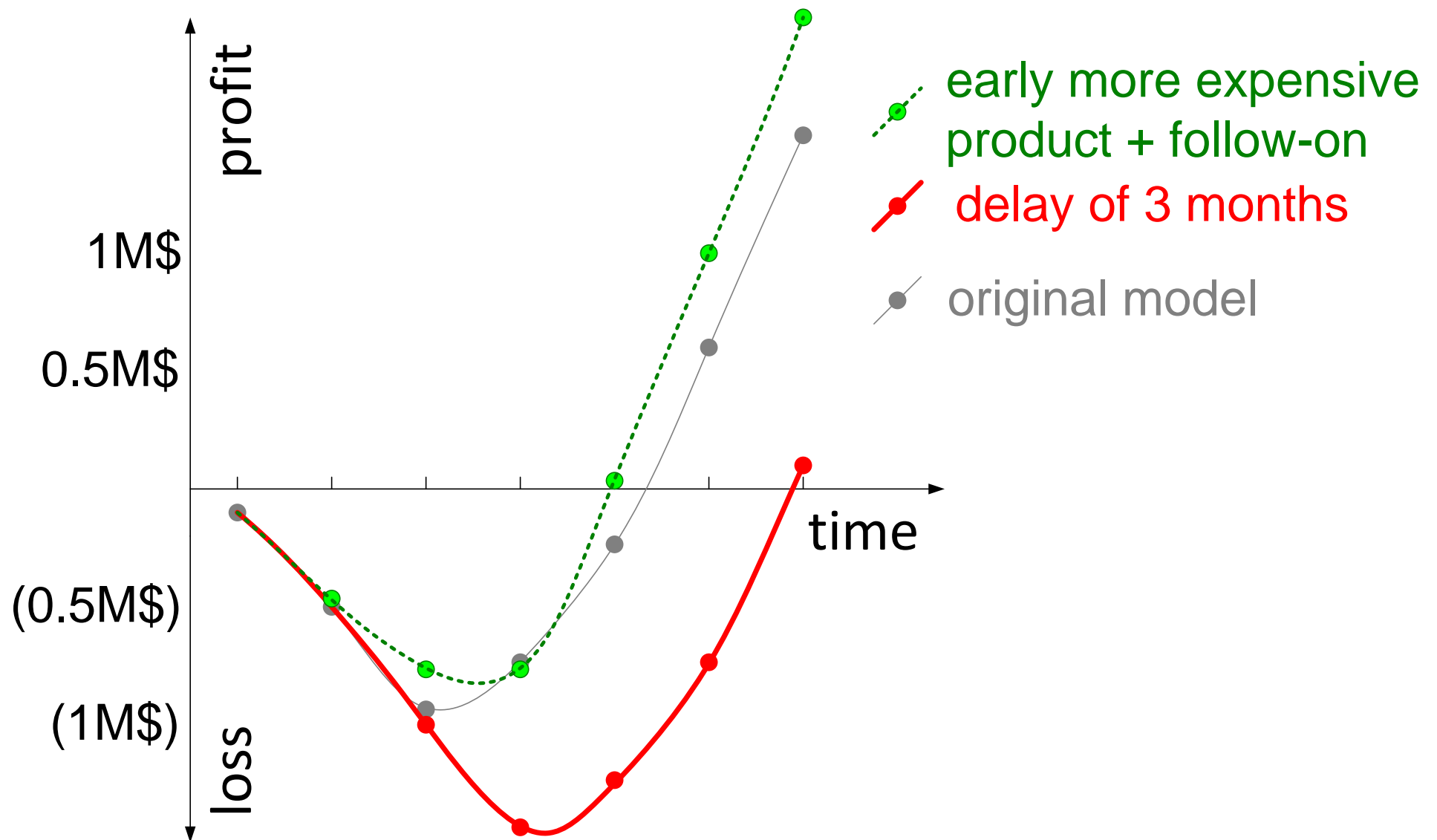
variable cost = sales volume \* cost price / unit  
 income = sales volume \* sales price / unit  
 quarter profit = income - (investments + variable costs)

# The "Hockey" Stick

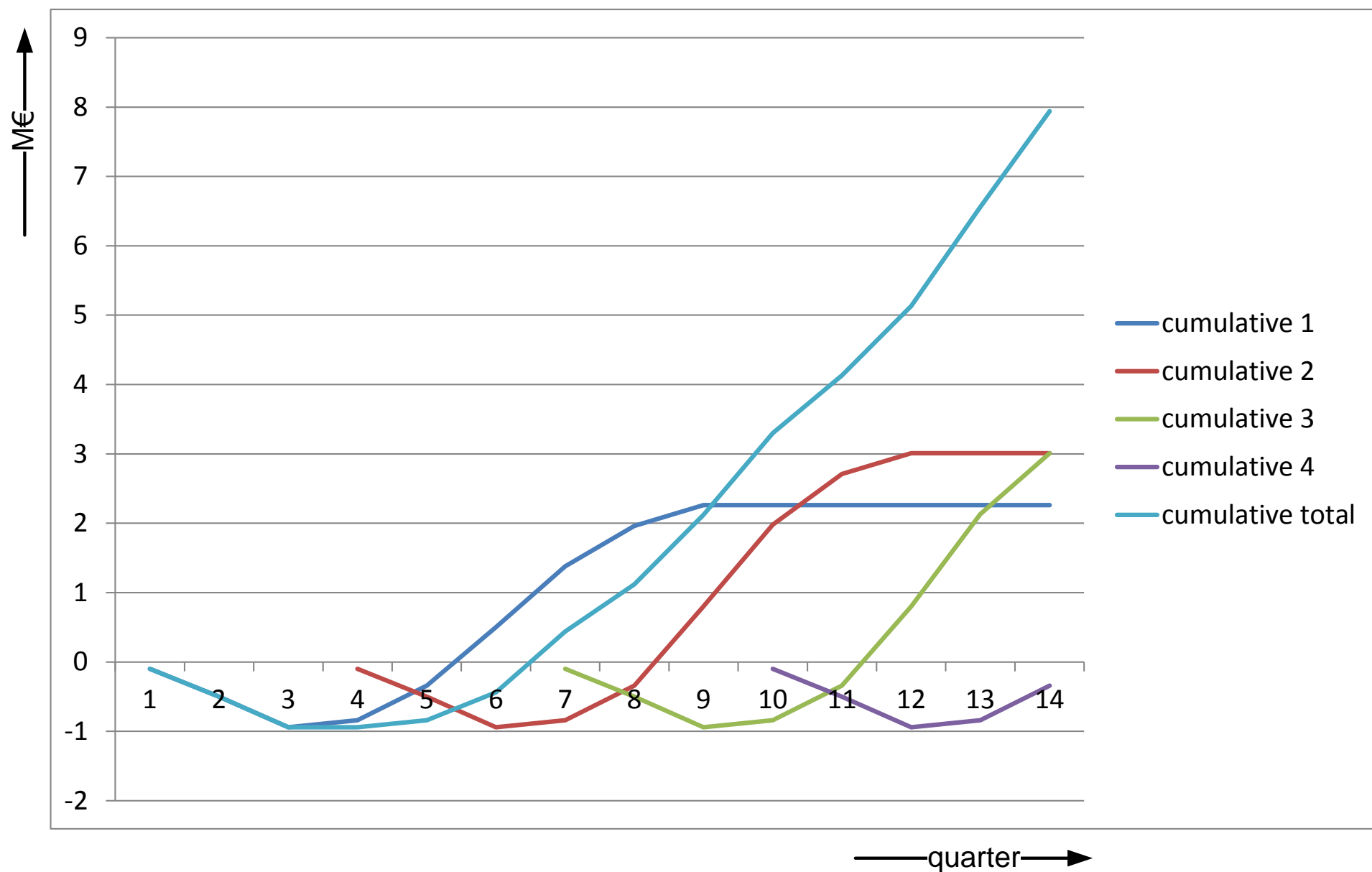




# What if ...?



# Stacking Multiple Developments



# Fashionable financial yardsticks

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Return On Investments (ROI)

Net Present Value

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

by *Gerrit Muller* Buskerud University College

e-mail: gaudisite@gmail.com

www.gaudisite.nl

## 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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October 20, 2017

status: concept

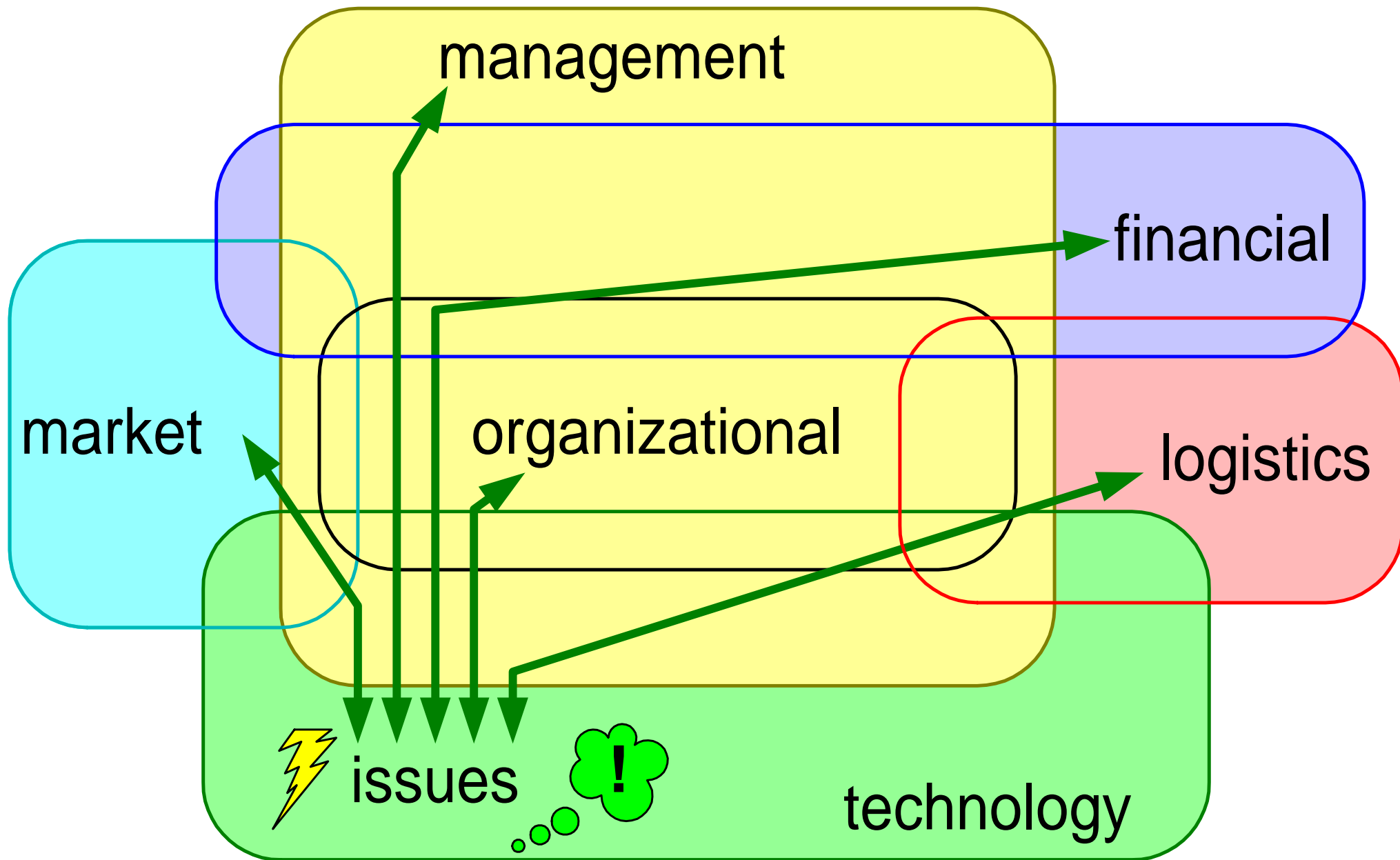
version: 0.1

mention the red information only

Market drivers	Options	typical performance	Power budget
Bill of material	Schedule	It's	profit-investment
Recommendation	Operating principle	worst-case performance	Power details

backup material

# Architectural issues related to managerial viewpoints



# Characteristics of managers in higher management teams

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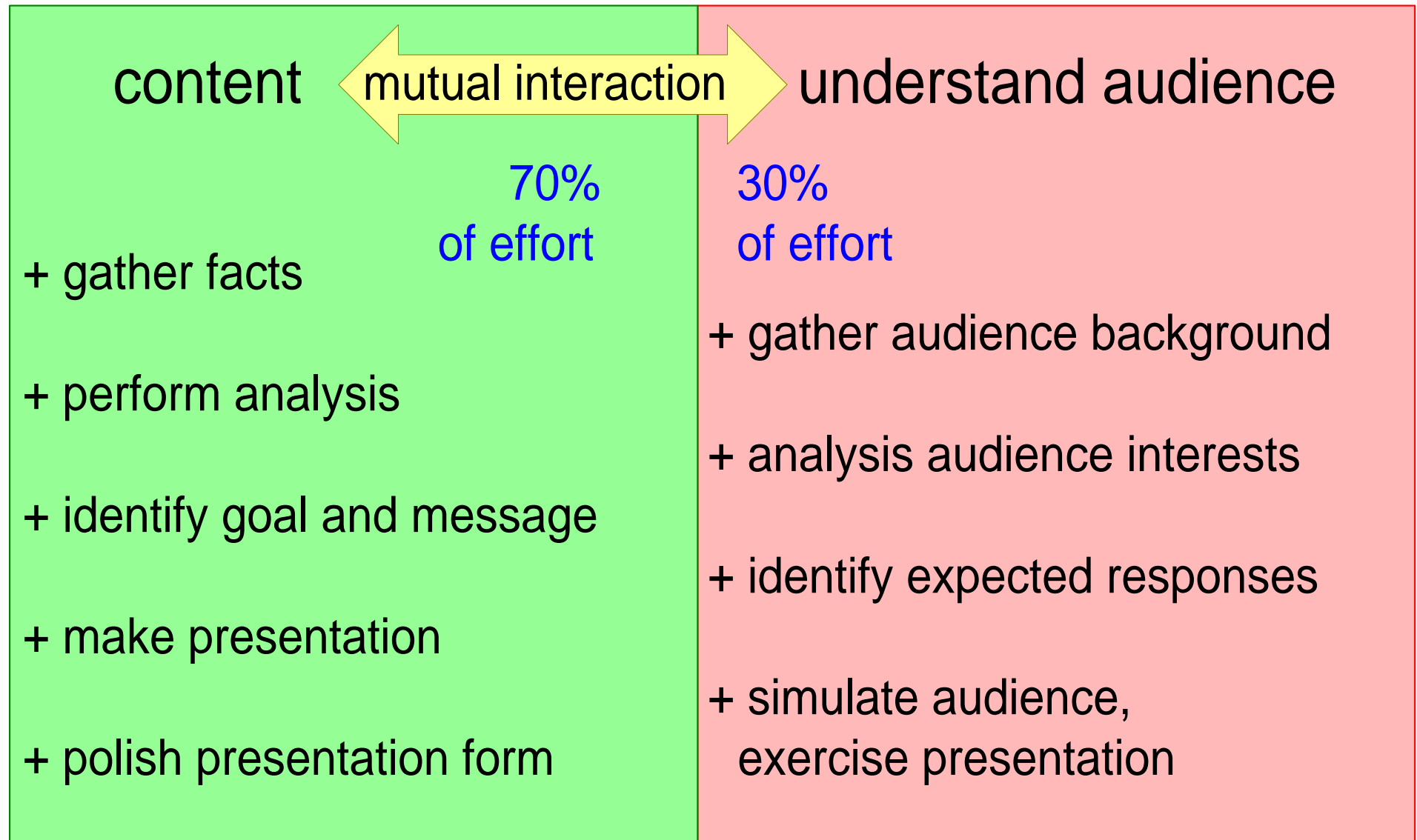
## *common characteristics*

- + 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

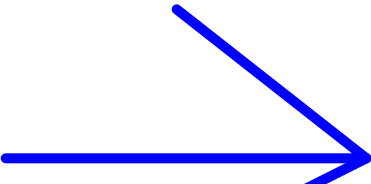
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+ clear problem statement (what, why)

+ solution exploration (how)

+ options, recommendations

+ expected actions or decisions



supported by  
facts and figures



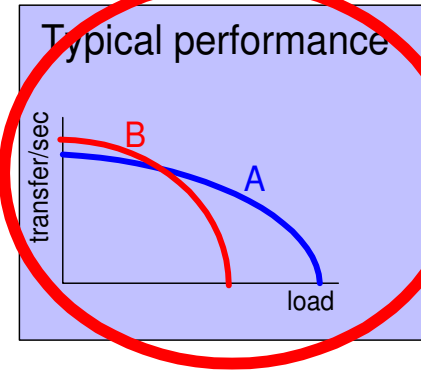
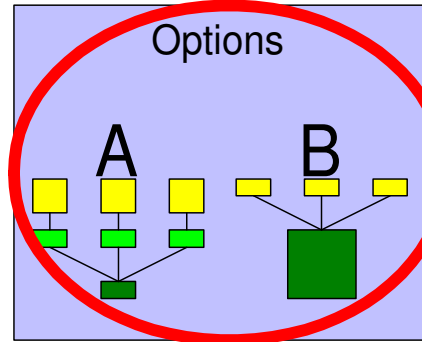
## mention the red information only

### Market drivers

- cost
- ttm
- wow
- DRM

- integration
- multiple suppliers
- nifty features
- fashionable design
- Hollywood pact
- standards

- MPEG4
- MP3
- color display
- ePen
- GPS sensor
- GSM
- UTMS
- BT
- 802.11b

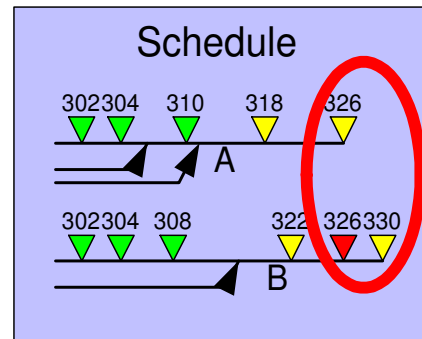


### Power budget

	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
anal	3	2
total	17	23

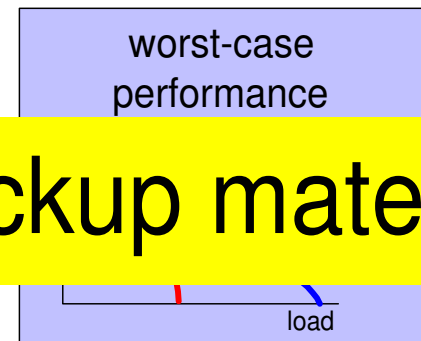
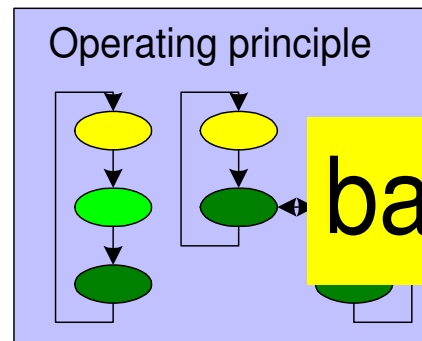
### profit-investment

	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

# Form is important

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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

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## *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*

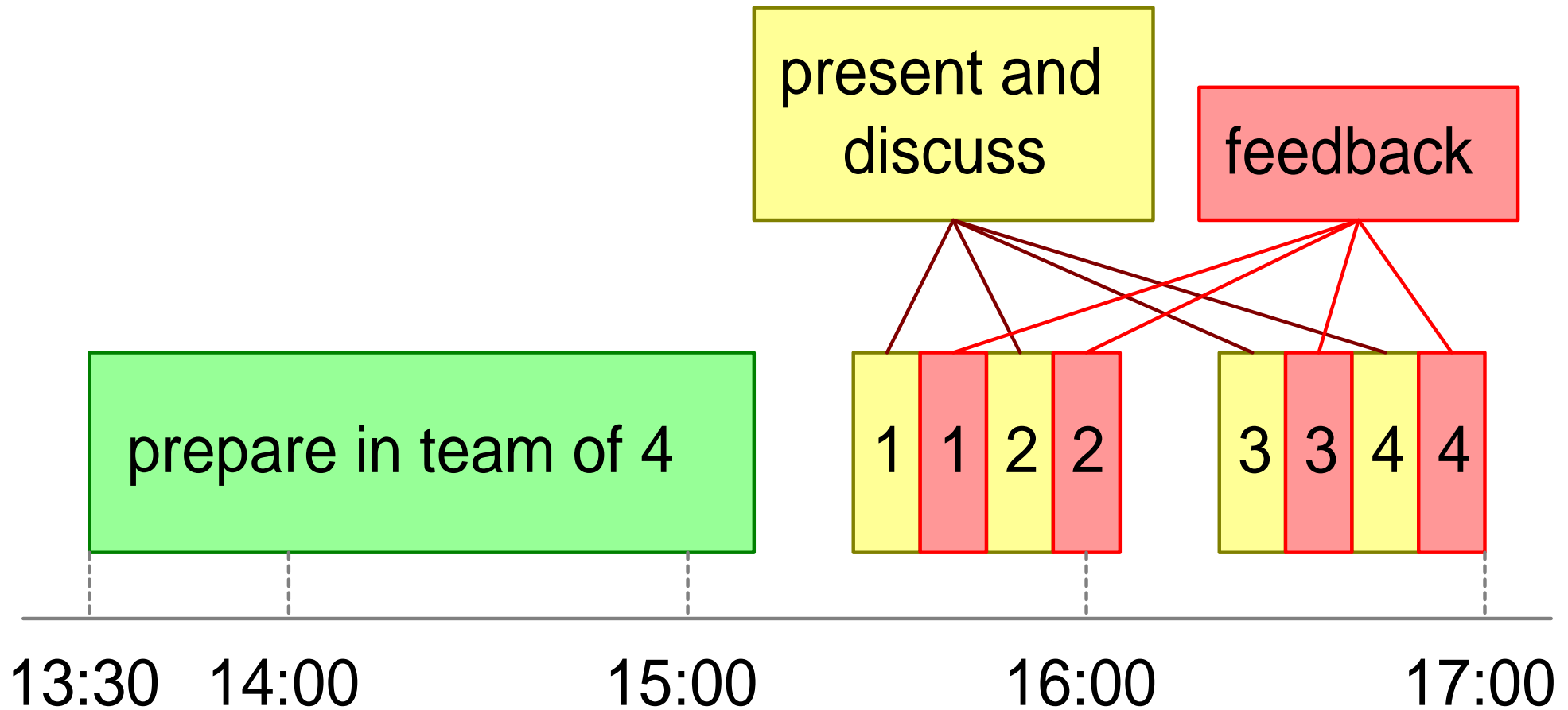
- + maintain the lead
- + be to the point and direct
- + acknowledge input, indicate consequences (facts based)

# Exercise presentation to higher management

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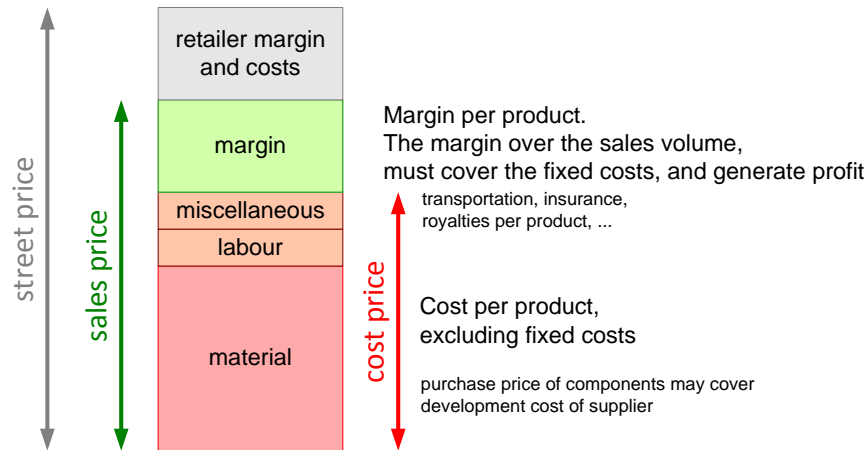
- + Bring a clear **architecture message** to
- + a **Management team** at least 2 hierarchical levels higher
- + with **10 minutes** for **presentation including discussion**  
(no limitation on number of slides)
- \* architecture message =  
**technology** options in relation with **market/product**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

# Exercise schedule

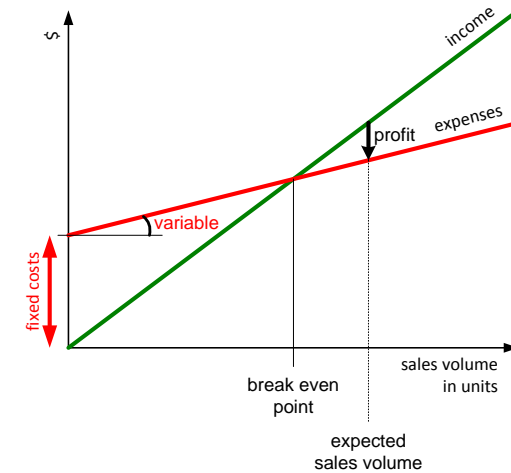


# Simplistic Financial Computations

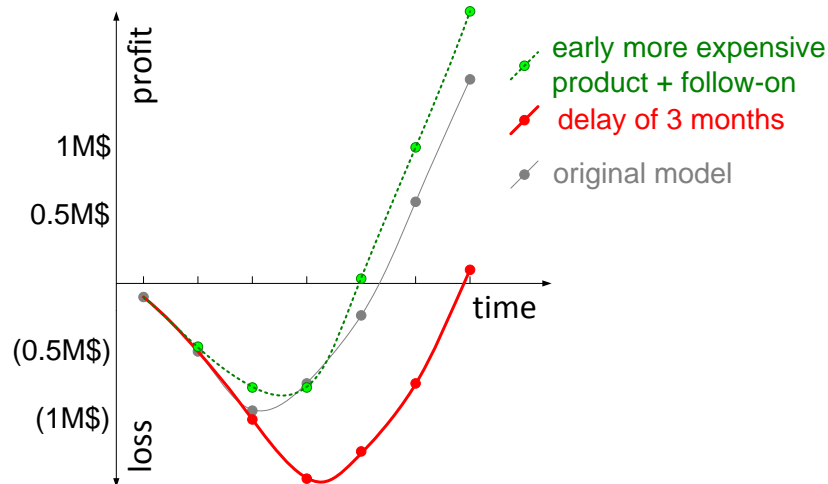
Product Margin = Sales Price - Cost



Profit as function of sales volume



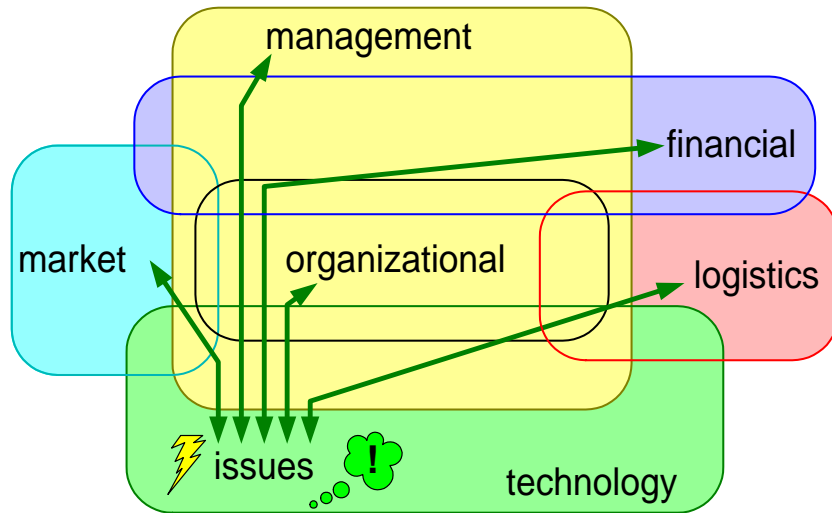
Hockey stick and scenarios



intentionally left blank

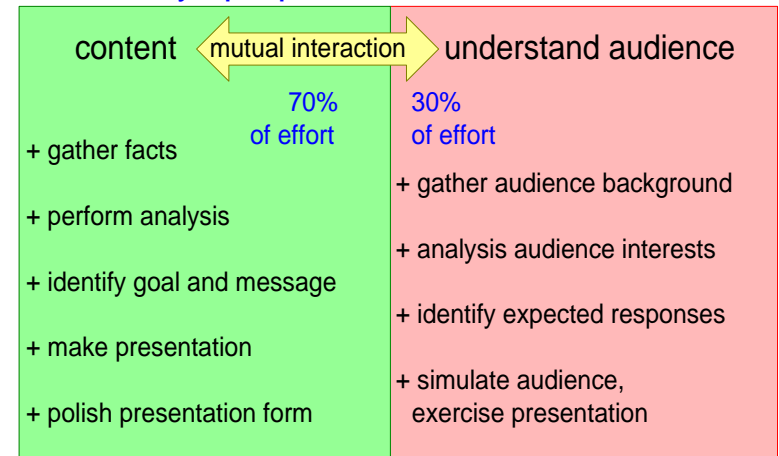
# Presentation to Management

## Managerial Viewpoints



## Prepare Content, Understand Audience

Always prepare with small team!



## Show underlying info

mention the red information only

## Form, do and do not

poor form can easily distract from purpose and content

presentation material

- + professional
- + moderate use of color and animations
- + readable

presenter's appearance

- + well dressed
- + self confident but open

+ use demos and show artifacts

but stay yourself, stay authentic