

# Simplistic Financial Computations for System Architects.

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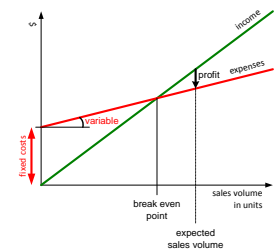
## Abstract

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.

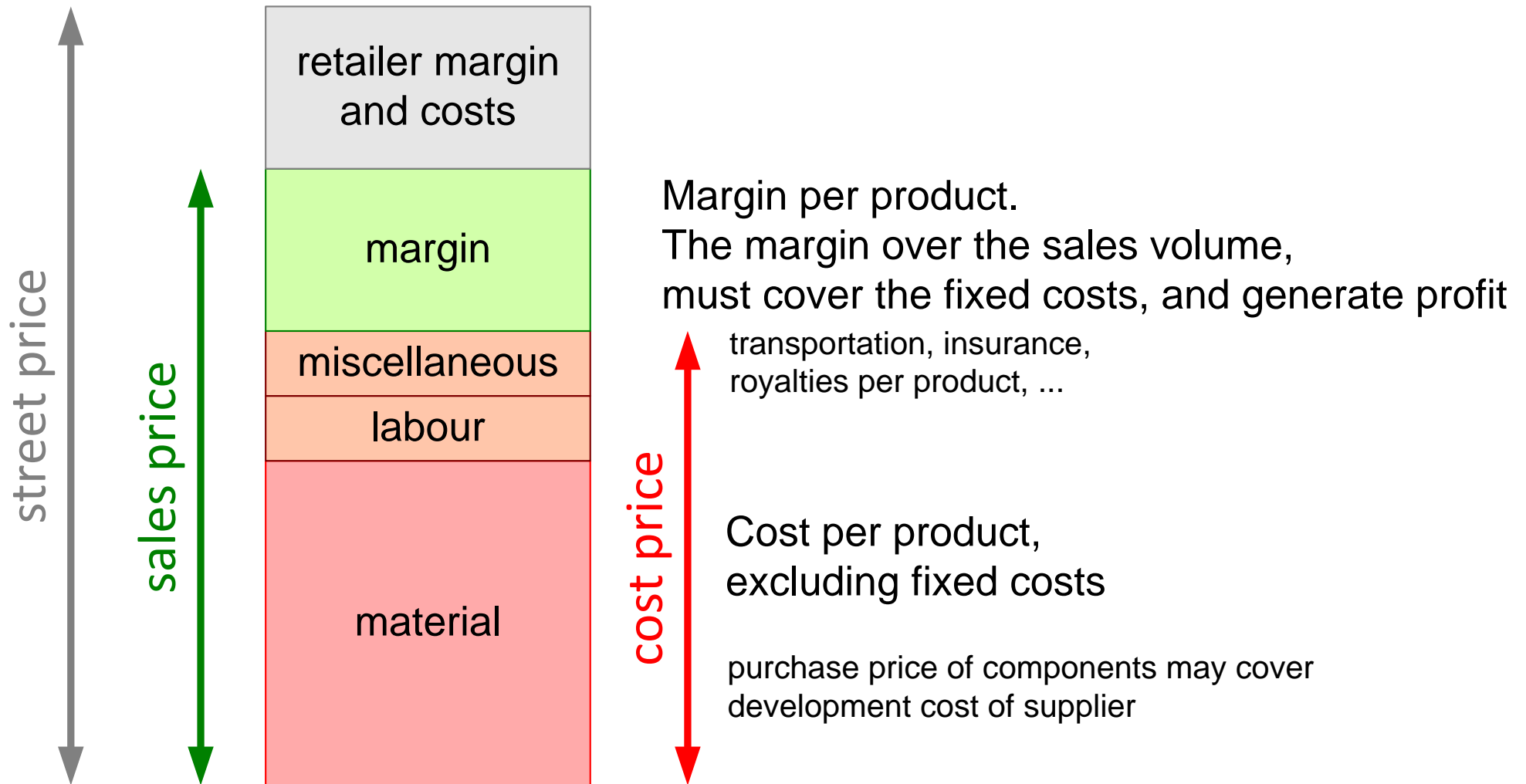
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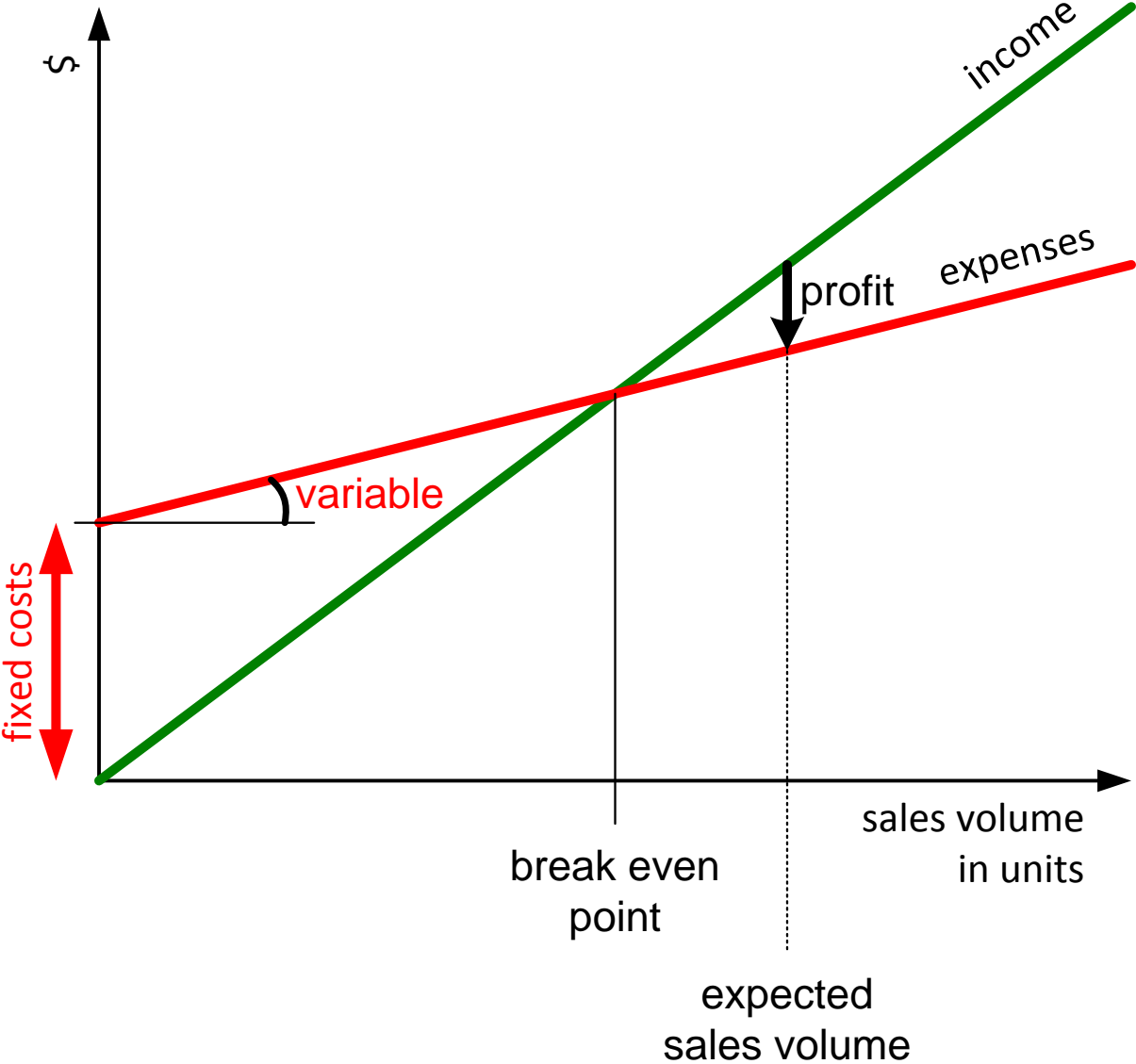
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# Product Margin = Sales Price - Cost

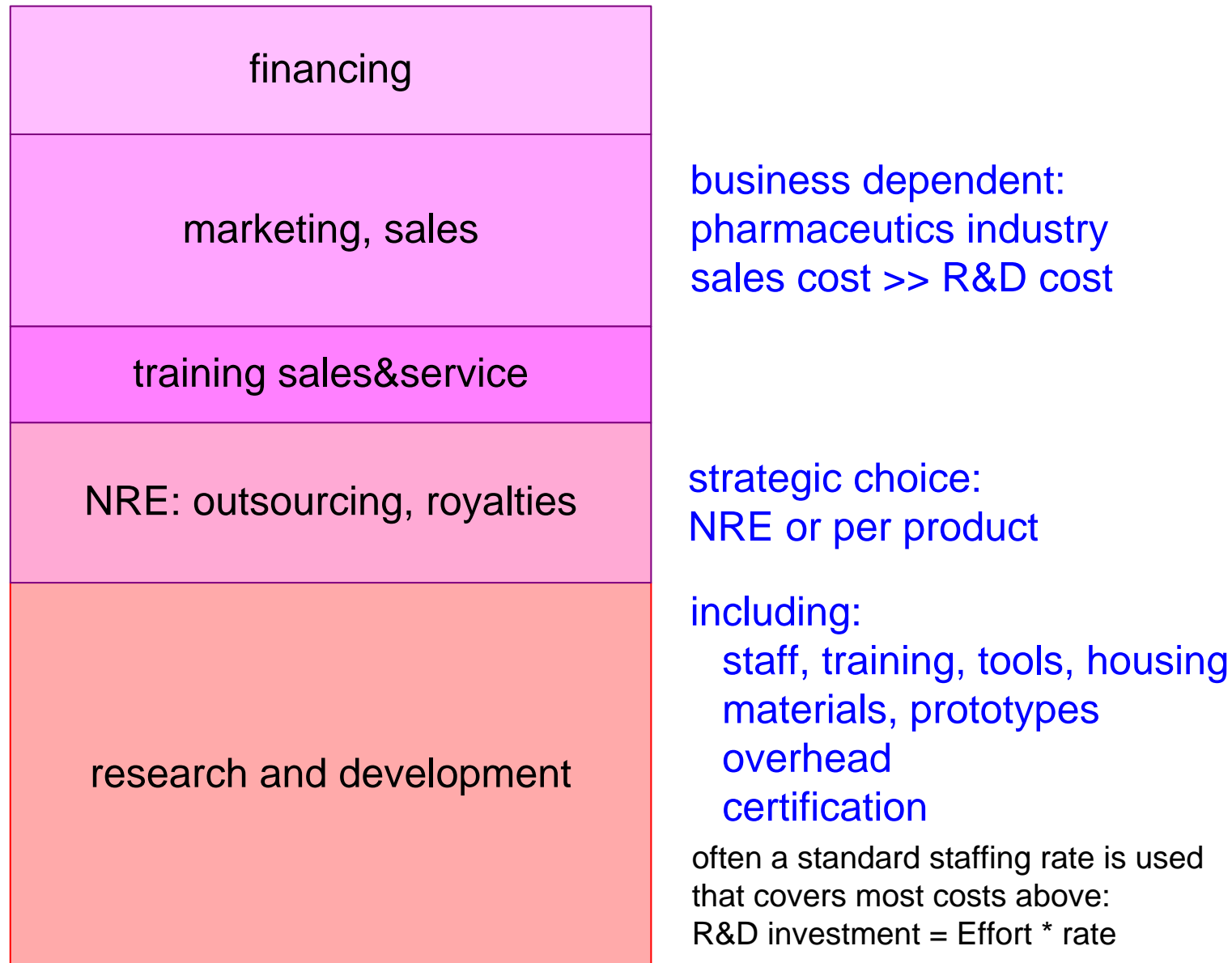


# Profit as function of sales volume

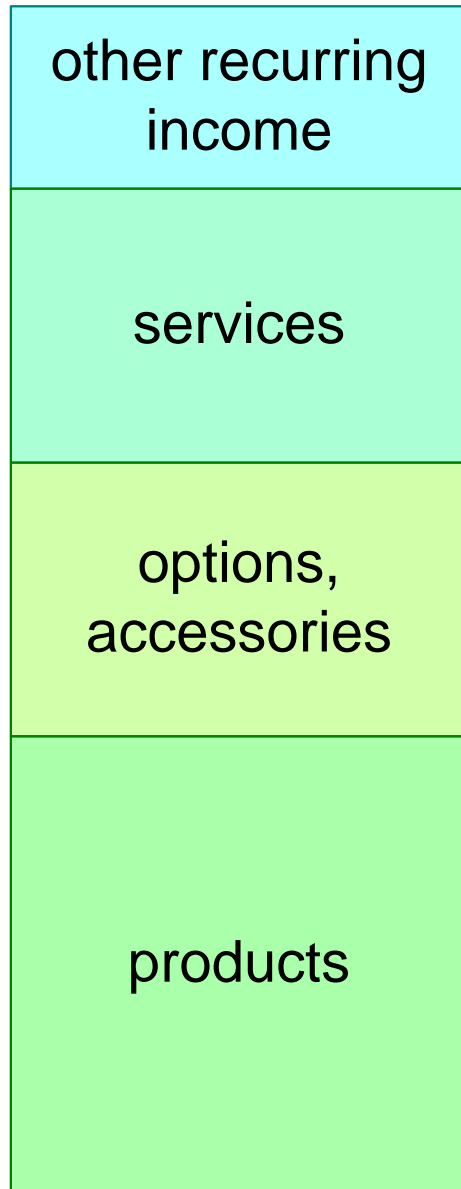


# Investments, more than R&D

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# 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

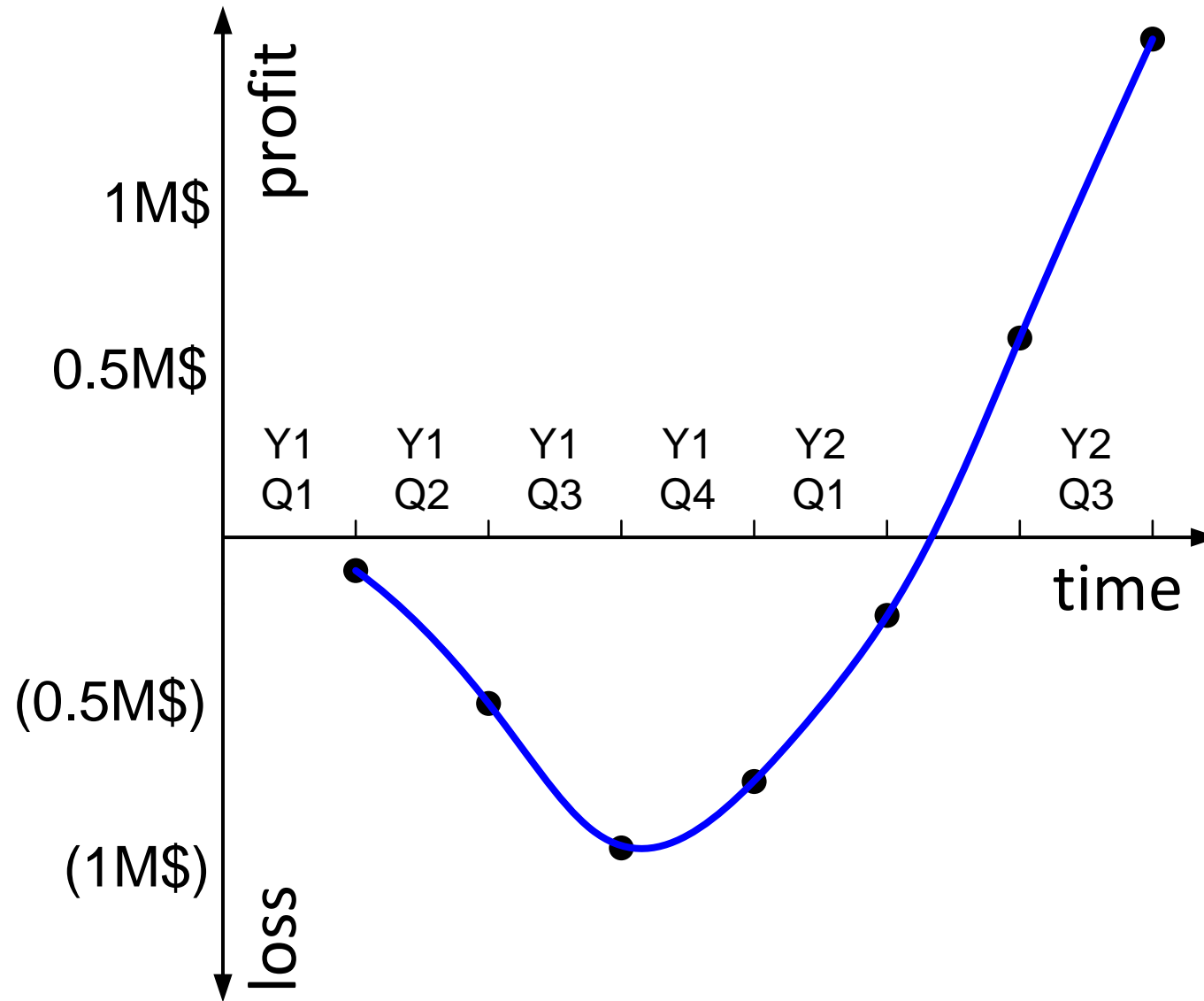
# The Time Dimension

|                         | Y1 Q1    | Y1 Q2    | Y1 Q3    | Y1 Q4    | Y2 Q1    | Y2 Q2   | Y2 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\$ |

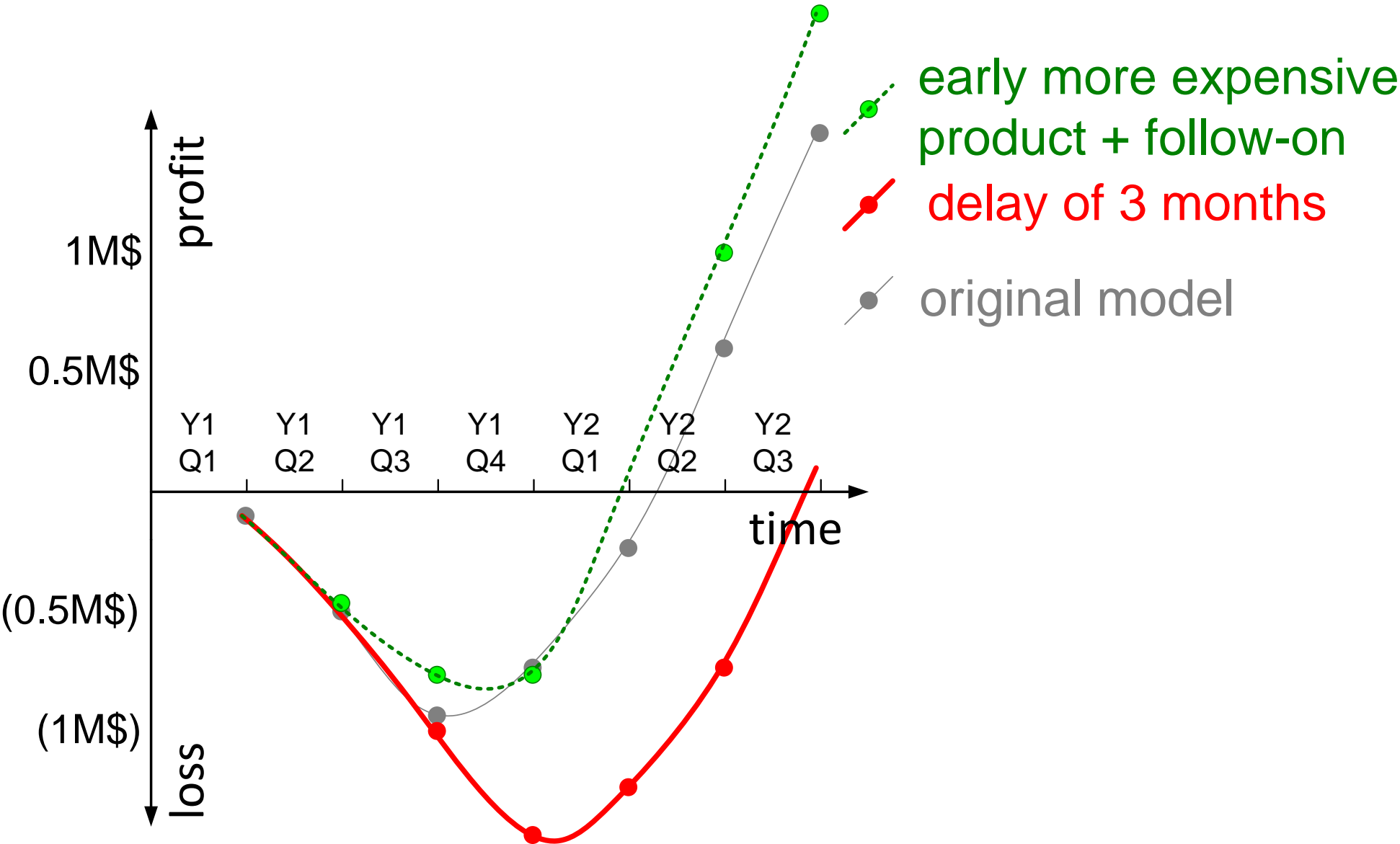
*cost price / unit = 20k\$*  
*sales price / unit = 50k\$*

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

# The "Hockey" Stick

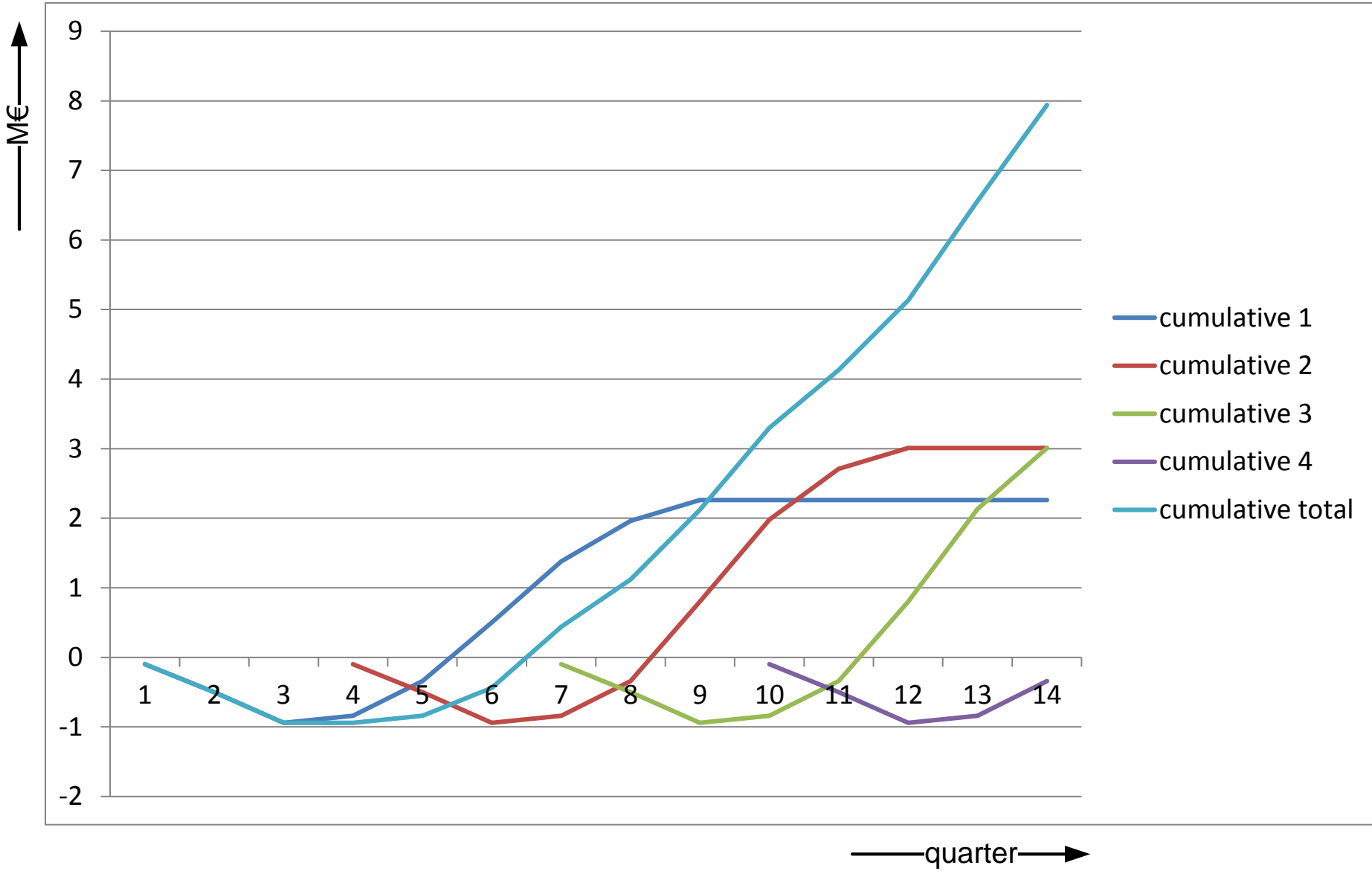


# What if ...?





# 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