



Tekemissalkun hallinnan lyhyt oppimäärä



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Agenda

What is the Development Portfolio?

What is Development Portfolio Mgmt?

What is the Health Barometer?

Past results & improvement suggestions

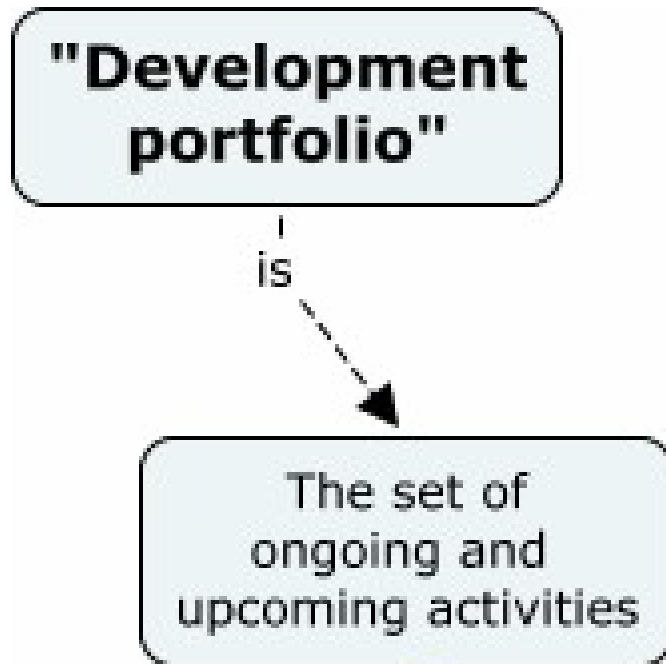
jarno.vahaniitty@soberit.hut.fi

Subject: **Mipro 16.4.2008**

What is the “Development Portfolio”?

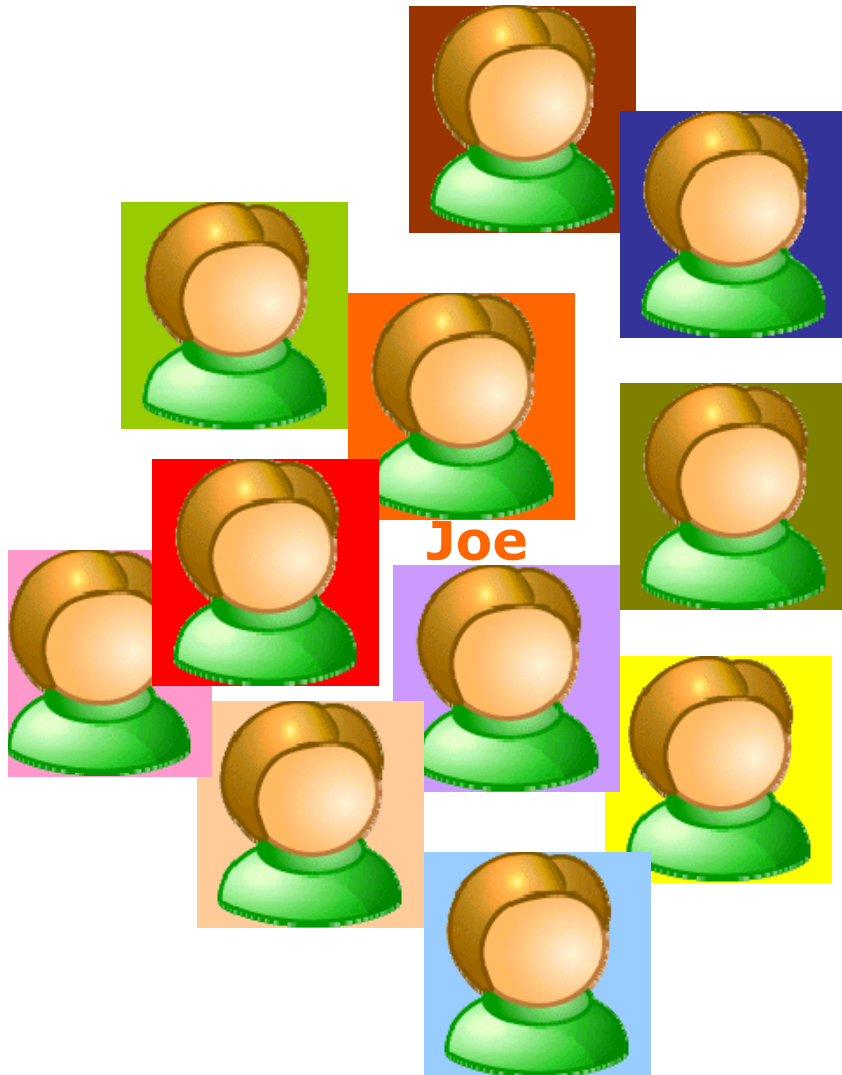


Definition:



An example:

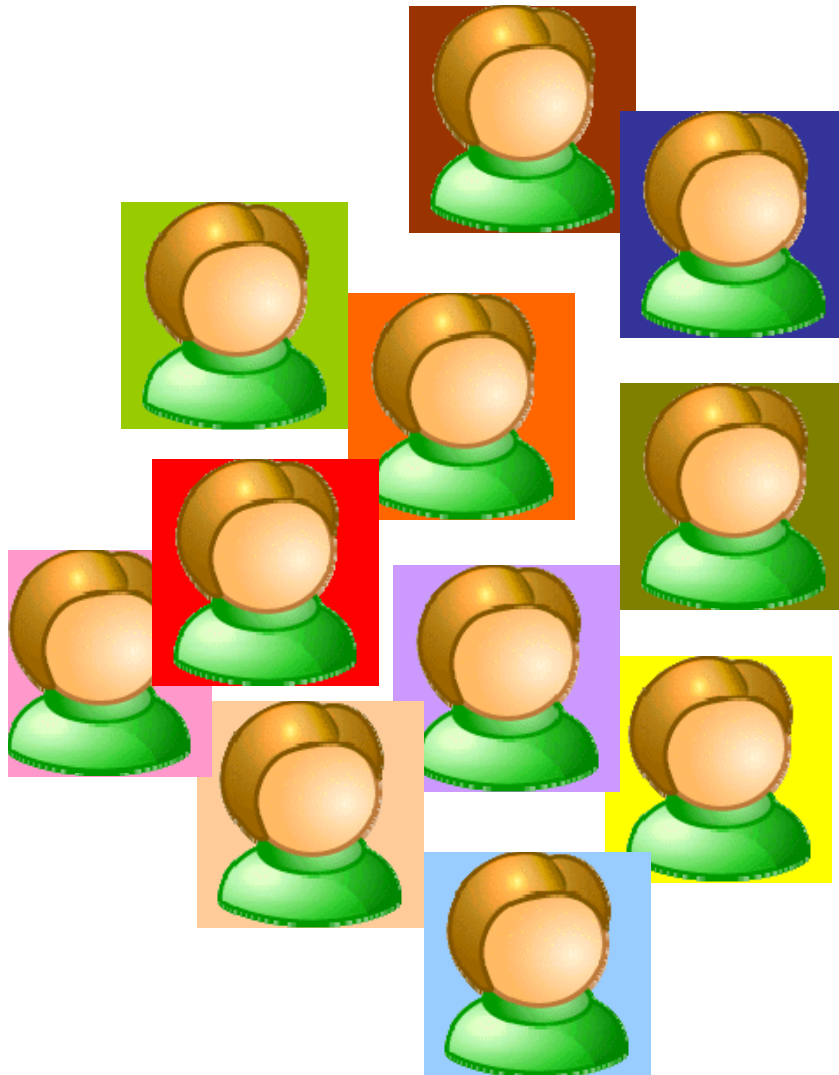
Development resources



**Development
resources**

**Case: a hybrid
software house**

**Development
activity types**



**Release-based
development**

1.0

Deliveries



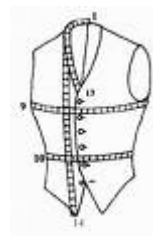
Maintenance



Consulting



**Customer-
specific
development**



**Platform
development**



Development
activity type



1.0
Release-based
development

Development
resource



Joe

is working on

1.0

Agilefant
(major release)

is an instance of

Activity



How many of you have work experience from the field?

Development portfolio

Does your company have an explicit "Development Portfolio"?

How does your company refer to its "Development Portfolio"?

**Solving a
problem at
customer A**

**Developing
Roadmapping
support for
Customer B**

**GUI facelift
("important",
but nobody
seems to have
the time....)**

**Training at
customer B**

**Upcoming
delivery for
customer C**

**HyperCalendar
(bugs are being
fixed)**

**Upcoming
development for
Customer C**

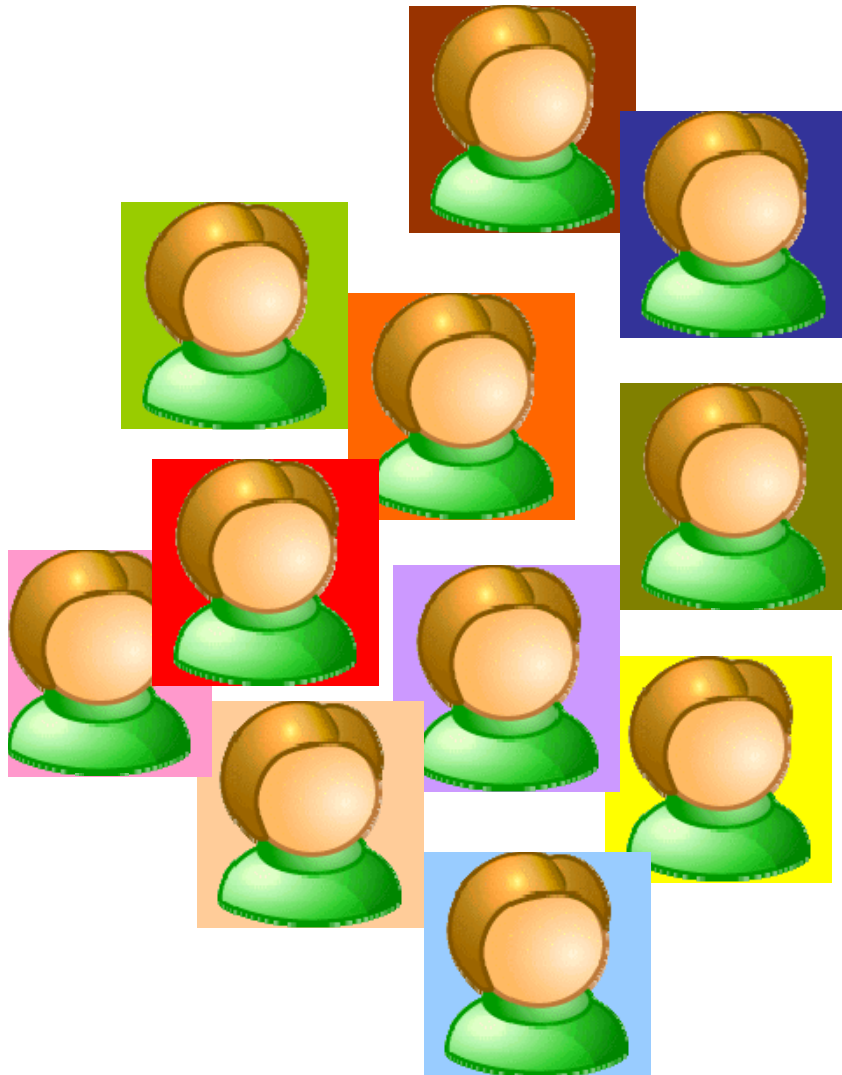
**Warranty repairs
for customer B
Server
optimisation**

**#7: 2 lectures at
the University
(upcoming)**

**Development
resources**

**Case: release-based
product development
only**

**Development
activity type** \$



Strategic



**Reducing
tech. debt**



Competitive adv.



Paradigmatic



**Customer
satisfaction**



Investment



What is "Development Portfolio Management"?


**"Project portfolio
mgmt"?**

**"Product portfolio
mgmt"?**





There's a Gap in the Theory

- Software engineering (SE) 
 - Primarily technical
 - Managing *individual* development projects
 - ✓ Agile methods discuss (mostly) the ideal case of single-team single-project single-customer
- New Product Development (NPD)
 - Models for managing product development
 - ✓ Adoption to SE still at the beginning
 - ✓ Direct applicability questionable
 - Manufacturing vs. Software?
 - Large corporation vs. Small company?

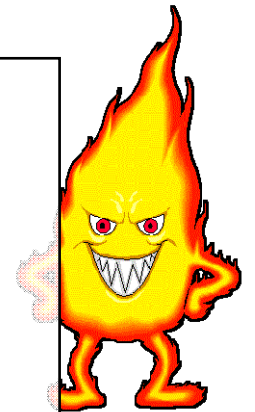


**I'm
Busy!**

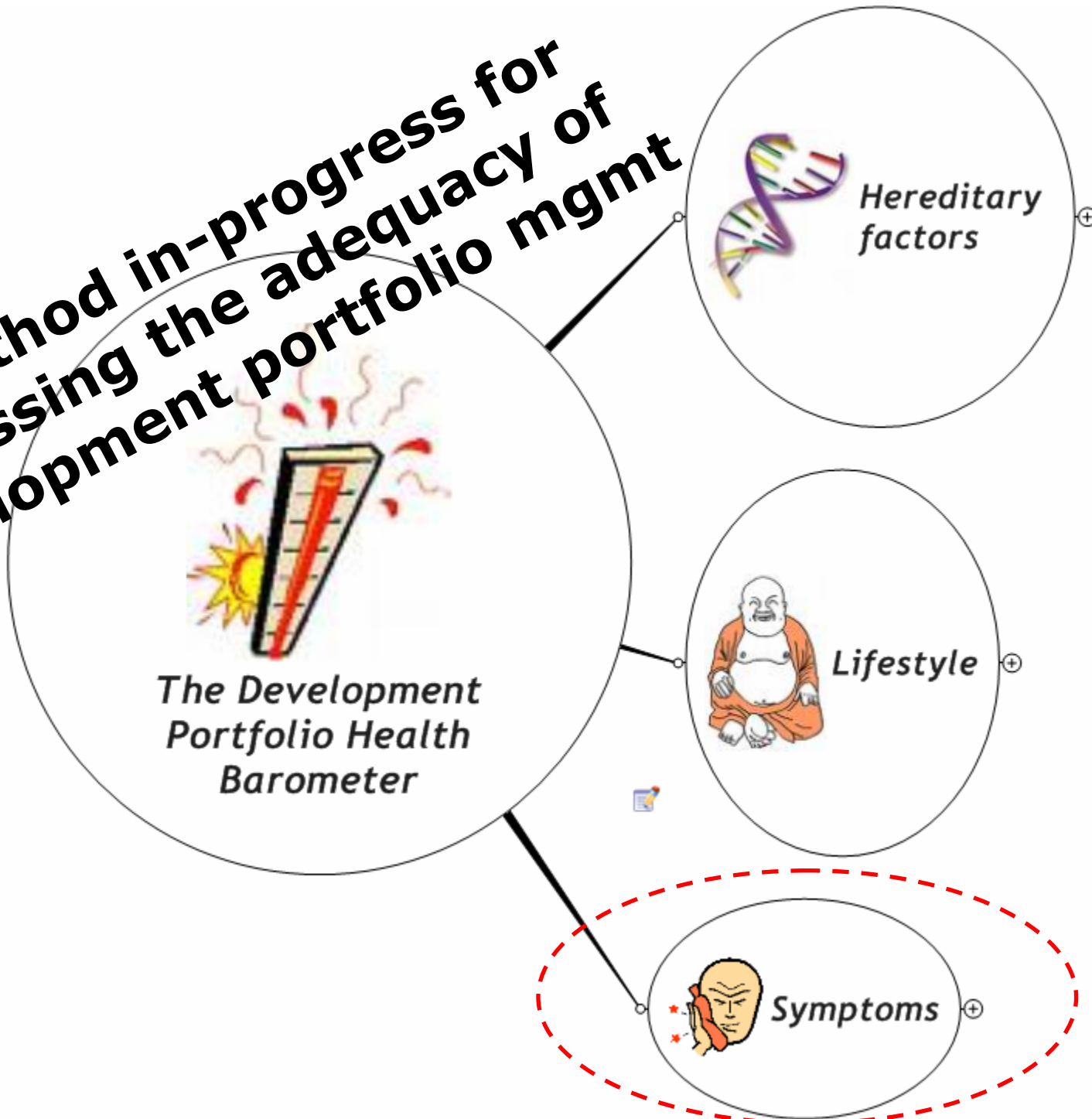


You first!

**What does the lack of
adequate portfolio
mgmt look like?**



A method in-progress for assessing the adequacy of development portfolio mgmt





*Multitasking
madness*

+



Fire-fighting

+



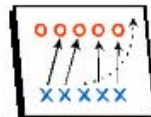
Overcommitment

+



*Toothless
decision-making*

+



*Lack of
strategic
alignment*

+



*Schedule
slippages*

+



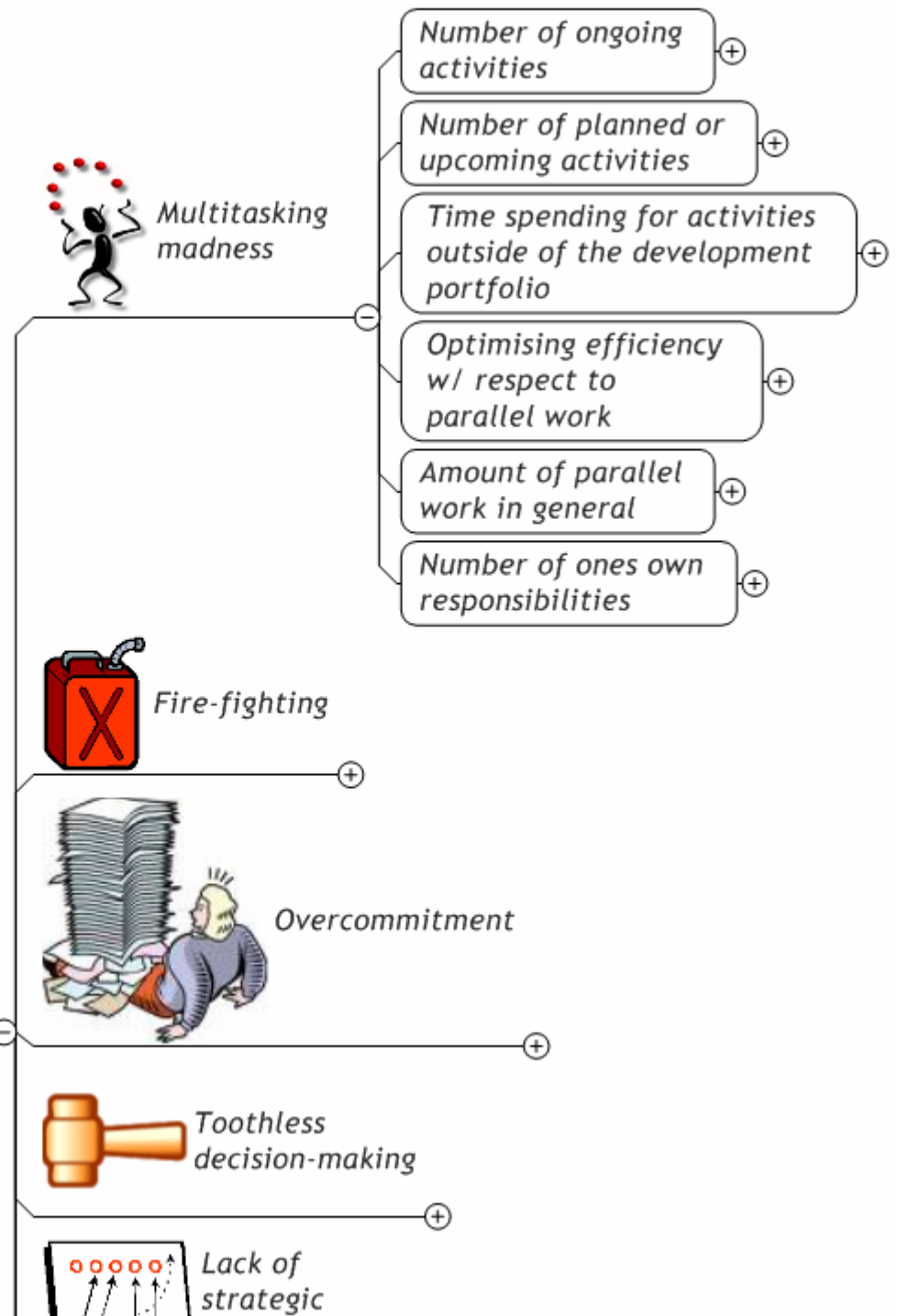
*Failures &
disappointments*

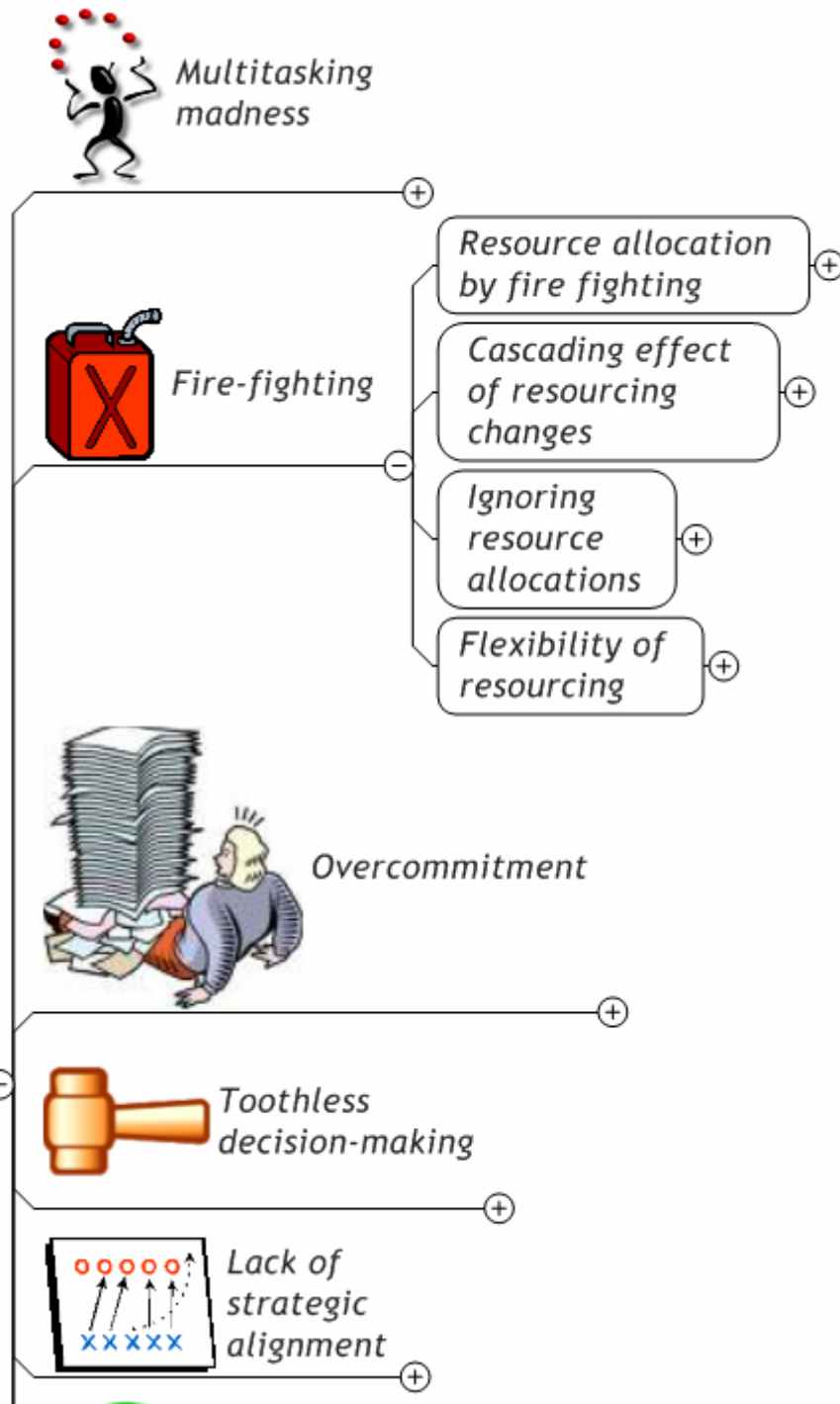
+



*"We need to
improve our
project mgmt"*

+







+

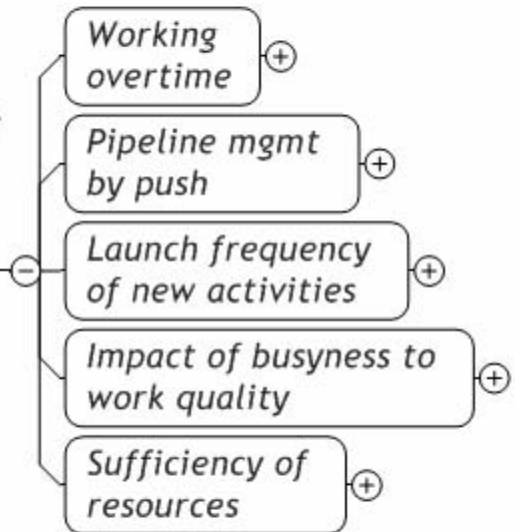


Fire-fighting

+

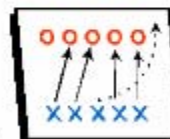


Overcommitment



Toothless decision-making

+



Lack of strategic alignment

+



Schedule



*Multitasking
madness*

+



Fire-fighting

+



Overcommitment

+



*Toothless
decision-making*

-

*Pruning of non-essential
activities*

+

*Management involvement in
decisions regarding activities*

+

*Monitoring progress of
activities*

+

Rate of change of priorities

+

*Management response to
problems*

+

*Senior mgmt's involvement in
portfolio level decision-making*

+

*Health of the dialog between
Business and Development*

+



*Lack of
strategic*



+



+

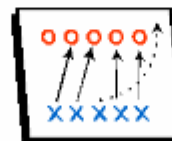


+



Toothless decision-making

+



Lack of strategic alignment

-

Strategic alignment of ongoing activities

+

Significance of ongoing activities

+

Size of ongoing activities

+



Schedule slippages

+



Multitasking
madness

+



Fire-fighting

+



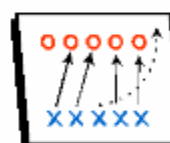
Overcommitment

+



Toothless
decision-making

+



Lack of
strategic
alignment

+



Schedule
slippages

-

Progress of
activities

+

Activity progress
status reporting

+



Failures &



Fire-fighting

+



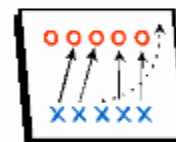
Overcommitment

+



Toothless
decision-making

+



Lack of
strategic
alignment

+



Schedule
slippages

+



Failures &
disappointments

-

Performance
of R&D

+

Concentration and
non-disturbance of
work

+

Business
success

+



Fire fighting

+



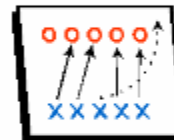
Overcommitment

+



Toothless
decision-making

+



Lack of
strategic
alignment

+



Schedule
slippages

+



Failures &
disappointments

+



"We need to
improve our
project mgmt"

-

Investing in managing
individual activities

+

Investing in managing the
development portfolio

+

Iterations

1) Splitting the development with control points

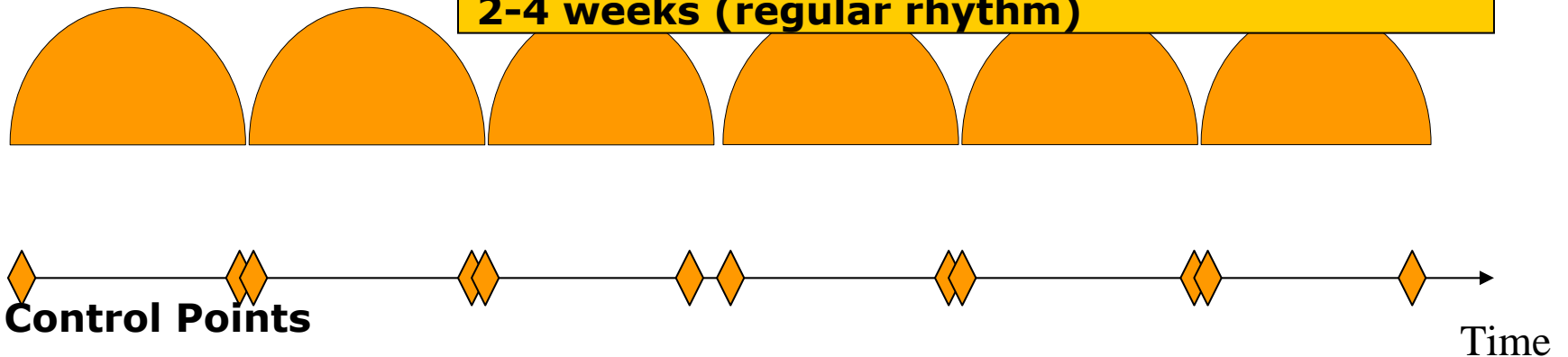
Doing

- Suitable increments of functionality
- Freezing the requirements and resources
 - ⇒ *work without constant interruptions (työrauha)*
- Fixed schedule, adjustable scope

Planning – in the control points

- Regular reflection of the situation at hand
- Ending the previous iteration:
status check & demonstration
- Planning the following iteration

2-4 weeks (regular rhythm)

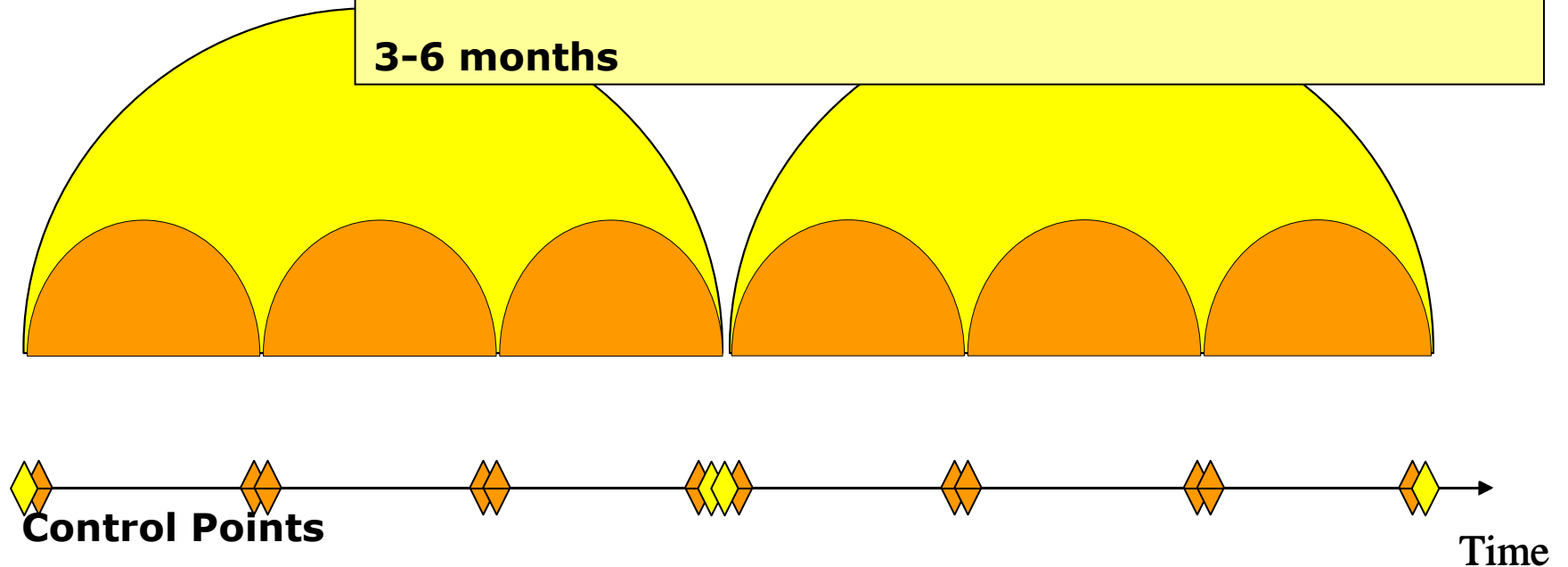


(Release) Projects

2) Business-wise grouping of the iterations

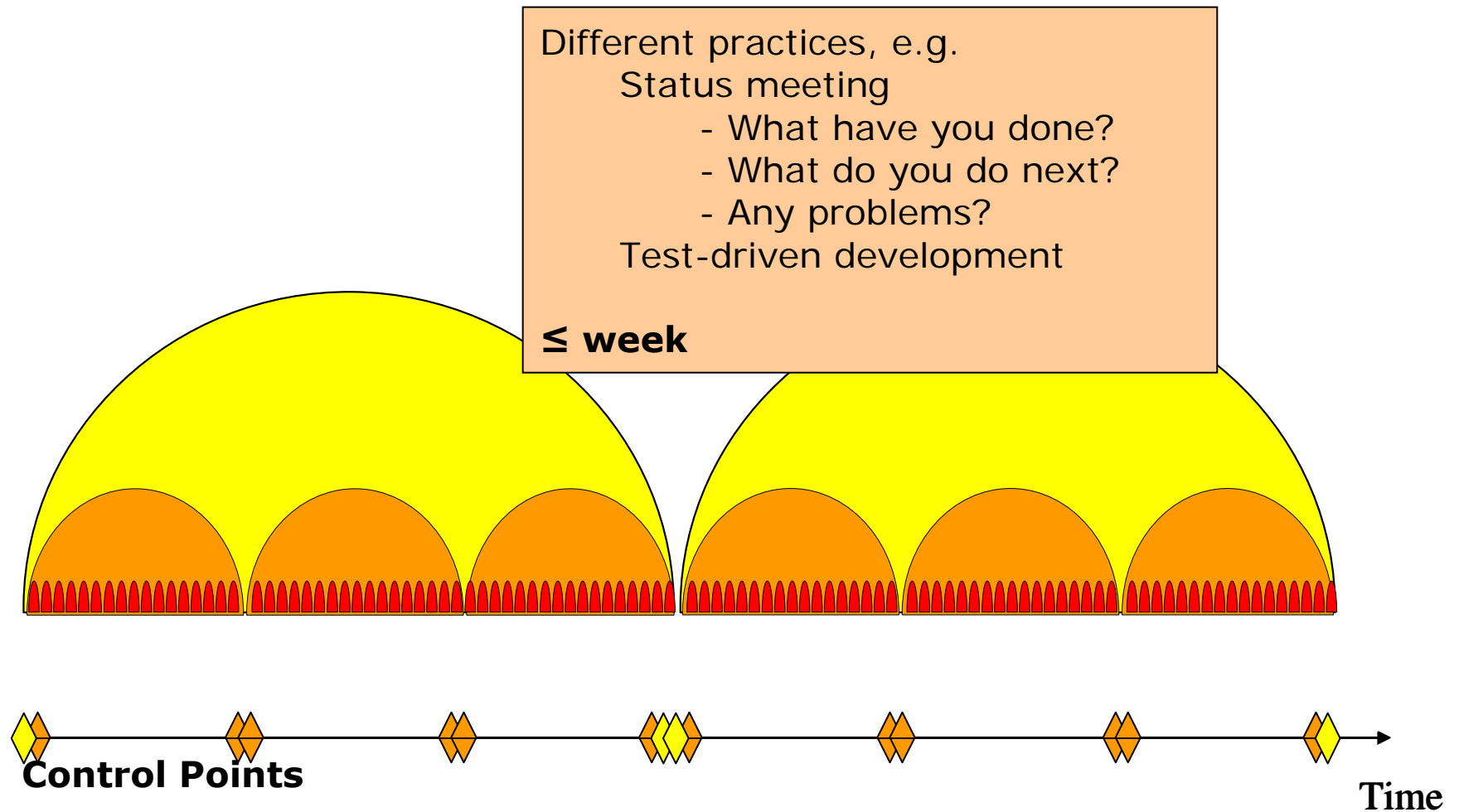
- Release criteria and goals
- Iteration planning
 - Timing, initial goals, scope, themes
- Resourcing
 - Investment and prioritisation
 - Roles and responsibilities

3-6 months



Heartbeats

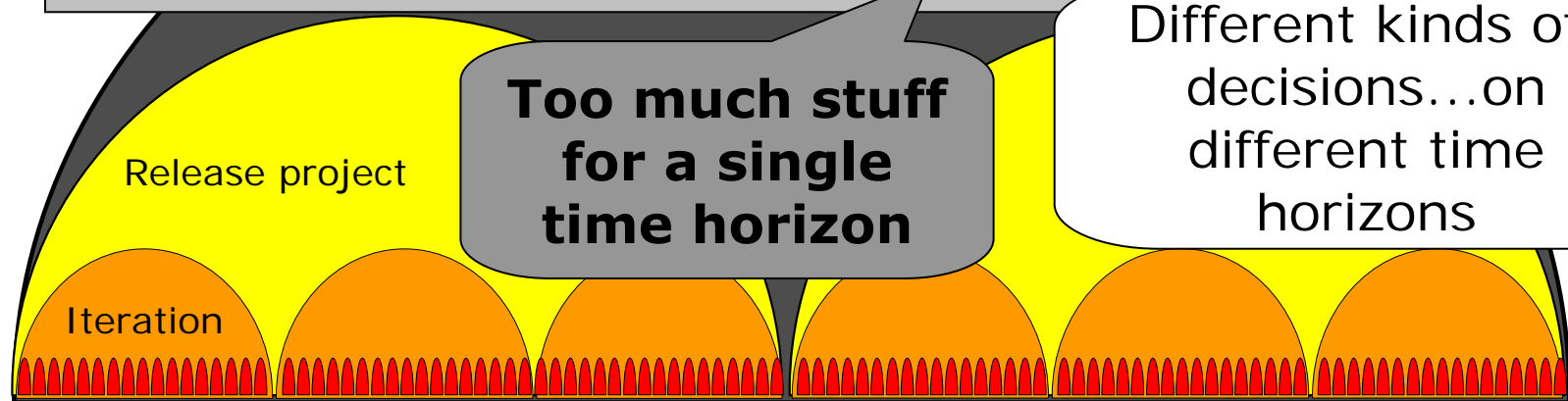
3) Monitoring progress and synchronising daily work



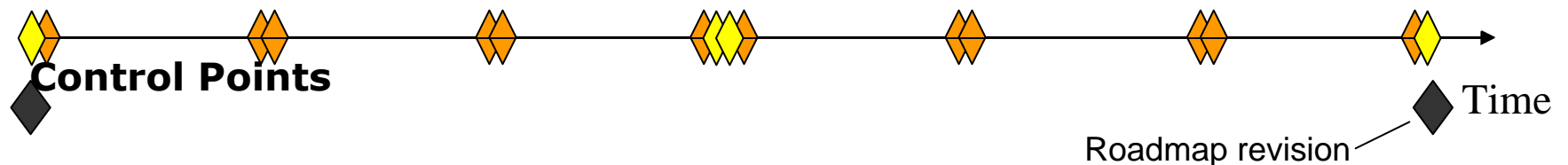
"Strategic Release Management"

- **Long-term product and release planning** (Release cycles, development rhythm, goals and contents of future releases, complementary services, estimating future resource needs, ...)
- **Management of the development portfolio** (resourcing, short-term prioritisation, fire-fighting, escalating decisions, ...)
- Connection to **corporate and business unit level strategy work**

Time horizon "> 2 releases ahead"



Heartbeats



Definition:

**"Development
portfolio
management"**



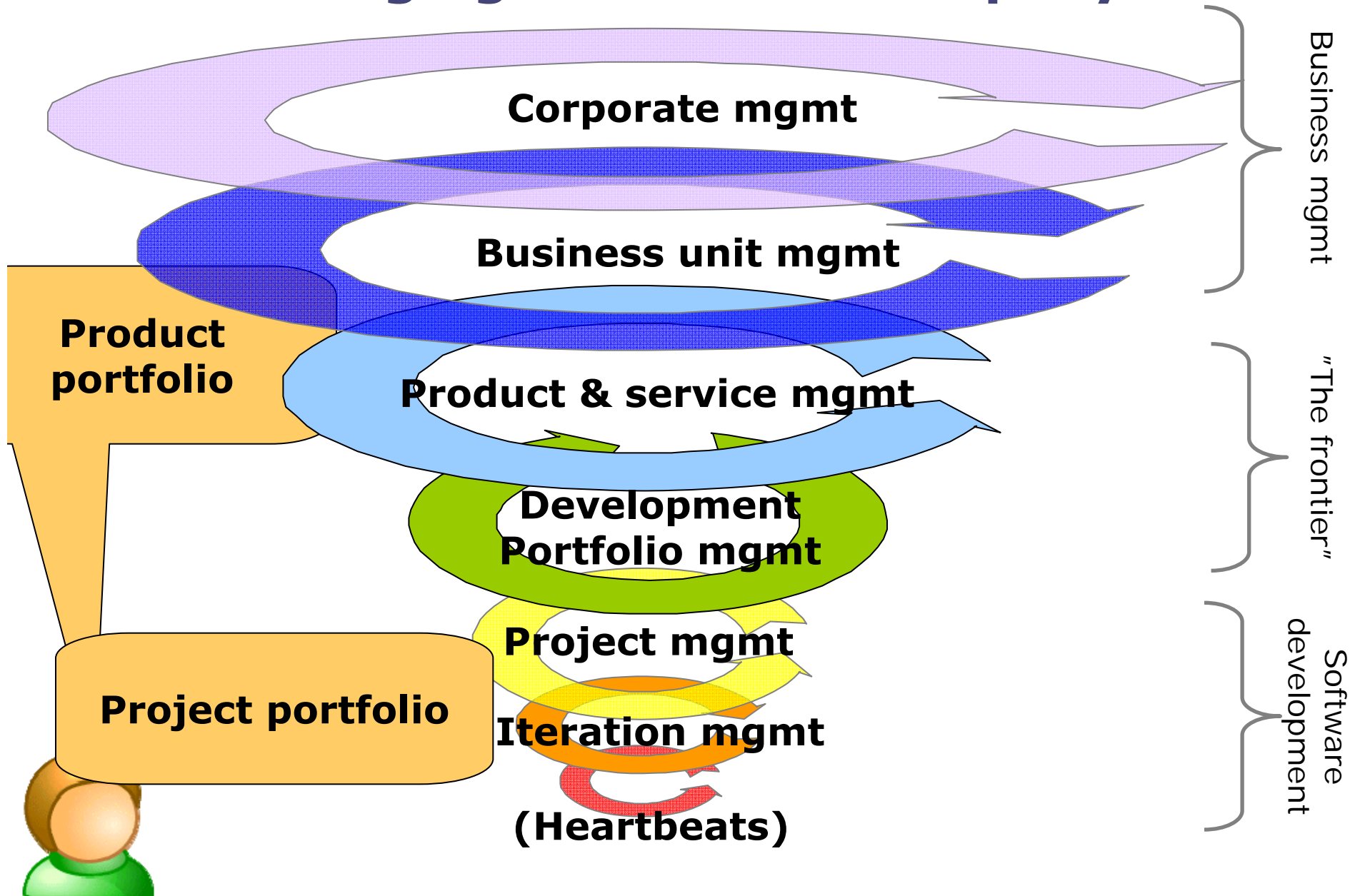


Sama kuin tuotekehitysportfolion hallinta? **(engl. *New Product Portfolio Management*)**

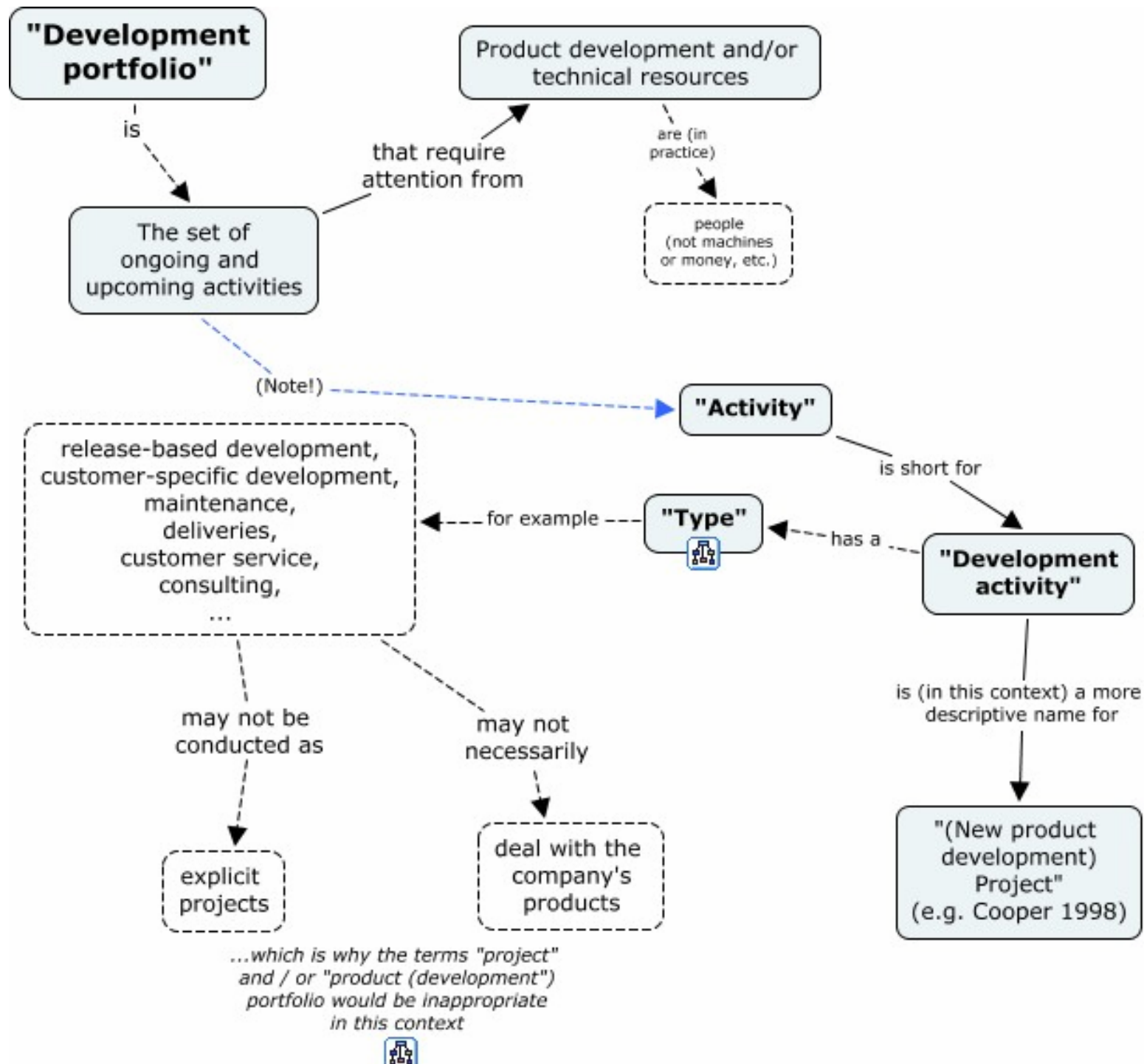
= Resursoinnin optimointia

- I. tuoton,
- II. strategian noudattamisen,
- III. riskinoton ja
- IV. käynnissä olevien projektien määrän kesken
(Cooper, Edgett, & Kleinschmidt 2002b)

Development Portfolio Mgmt vs. Managing a Software Company



To summarize:



Hienoa!

**Mutta otetaan tämä
portfolionhallintajutska käyttöön vasta
sitten kun oikeasti tarvitaan...**

*"Nobody knows
the trouble I've
seen..."*



**What factors affect the
need to have a good
lifestyle?**

**(i.e. an explicit, through-
thought development
portfolio mgmt process)**

If there's difficulty with many of these – run!



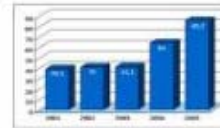
Multiple roles and responsibilities

+



Leveraging customer-specific products for product development

+



Financial situation

+



Clarity of strategy

+



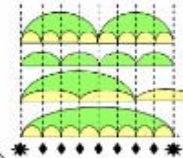
Incentive systems

+



Appropriateness of organisational structure

+



Health of management practices for each development activity type

+



Size of the (development) organization

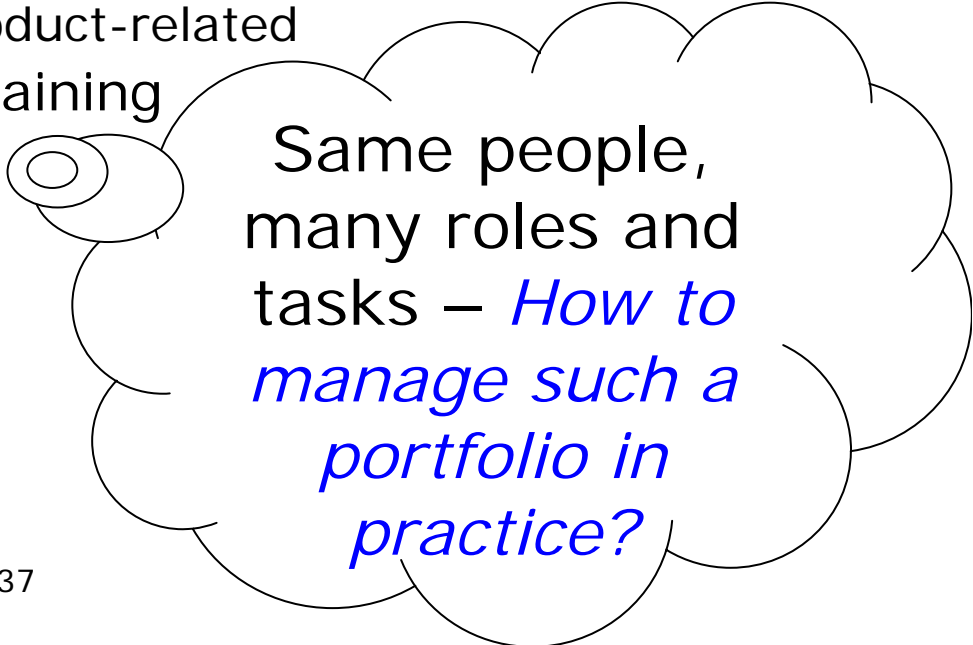


Wait a Minute – Do *Small* Companies Need Portfolio Management, Too?

■ Maybe ...

...By necessity, they usually employ a portfolio of different *types of development effort*

- Release-based product development
 - ✓ One or more products
- Customer-specific development
 - ✓ not necessarily even product-related
- Deliveries, installation, training
- Consulting services
- Body shopping
- ...

A large, hand-drawn style thought bubble with a small circle at the top left, containing text.

Same people,
many roles and
tasks – *How to
manage such a
portfolio in
practice?*



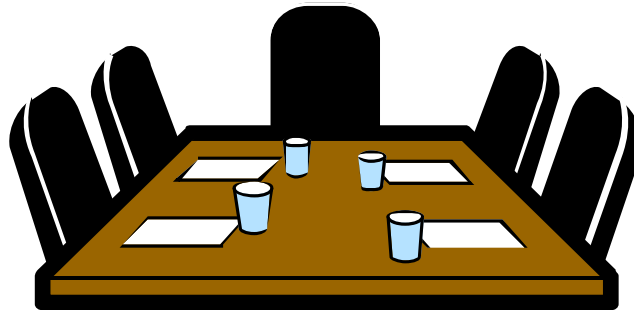
What We Found – Four Main Challenges in Small Software Companies

- 1) A shared understanding of the development portfolio missing
 - Overbooking of resources
- 2) Unclear and shifting priorities
 - Impulsiveness in setting up new projects
 - Not getting old assignments finished
 - Multiple and sometimes conflicting roles & responsibilities
- 3) No common understanding of the decision-making process
 - Prioritisation by fire-fighting or personal judgement
- 4) "Single project" decisions ripple across the portfolio
 - ... setting off cascades of new decisions

Miten sitä pitäisi tehdä?



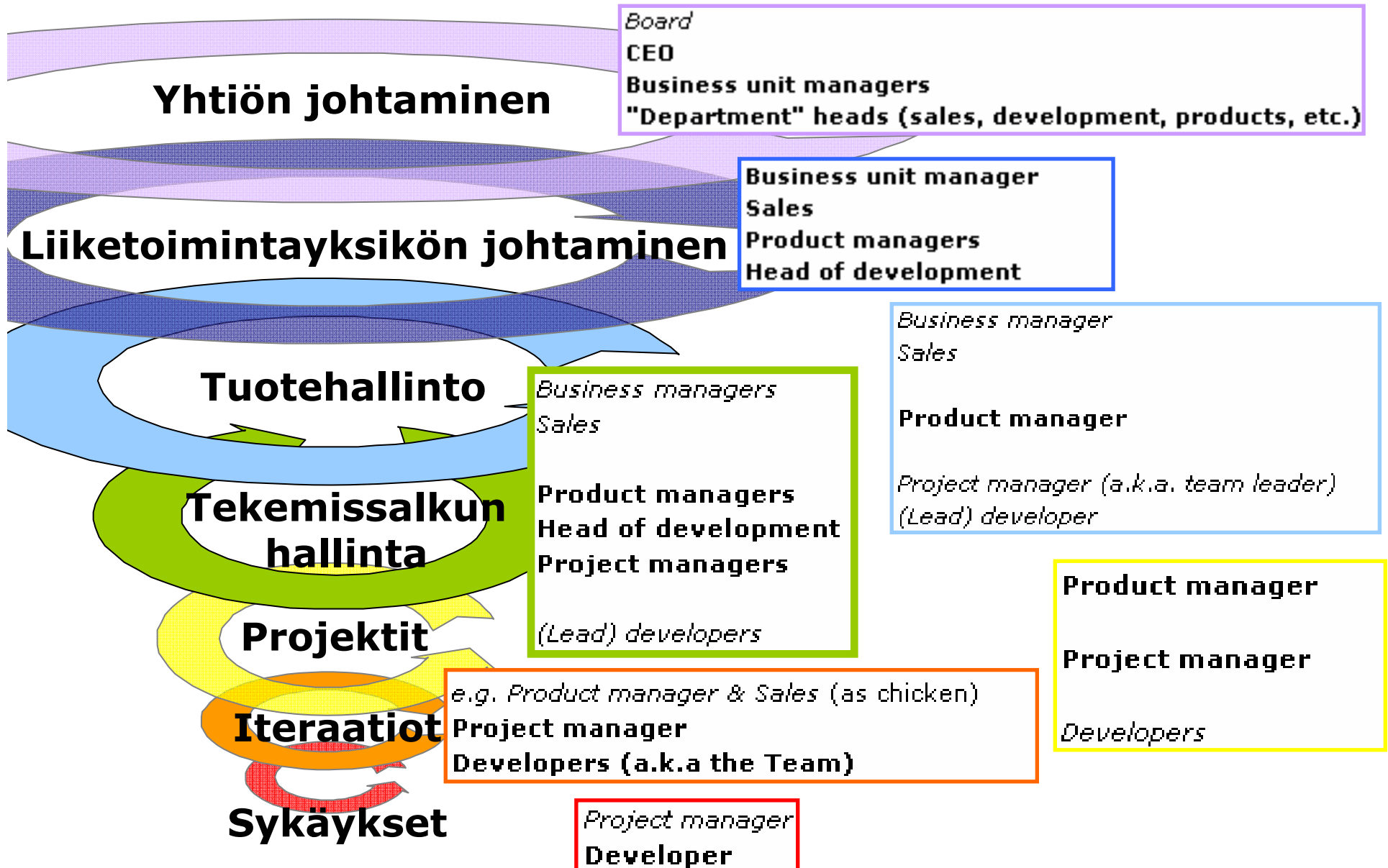
Keiden sitä tulisi tehdä?



Ohjelmistoyrityksen johtamisen "perusroolit"

- (Hallitus)
- Toimitusjohtaja
- Liiketoimintayksikön vetäjä(t)
- Myyjä(t)
- Tuotepäällikkö /-köt
- Ohjelmistokehityksen vetäjä
- Projektipäällikkö /-köt
- Seniori- /gurukoodaaja(t)
- Koodaaja(t)

Roolit & vastuut



Menossa mukana siis

- Hallitus
- Toimitusjohtaja
- Liiketoimintayksikön vetäjä(t)
- Myyjä(t)
- **Tuotepäälikkö /-köt**
- **Ohjelmistokehityksen vetäjä**
- **Projektipäälikkö /-köt**
- Seniori- /gurukoodaaja(t)
- Koodaaja(t)

“...melkein kaikki?!”

Perusesimerkki:



Miten sitä pitäisi tehdä?

**Vielä joitakin
nyrkkisääntöjä ja
peruspalikoita**



The first two steps in setting up DevPortMgmt:

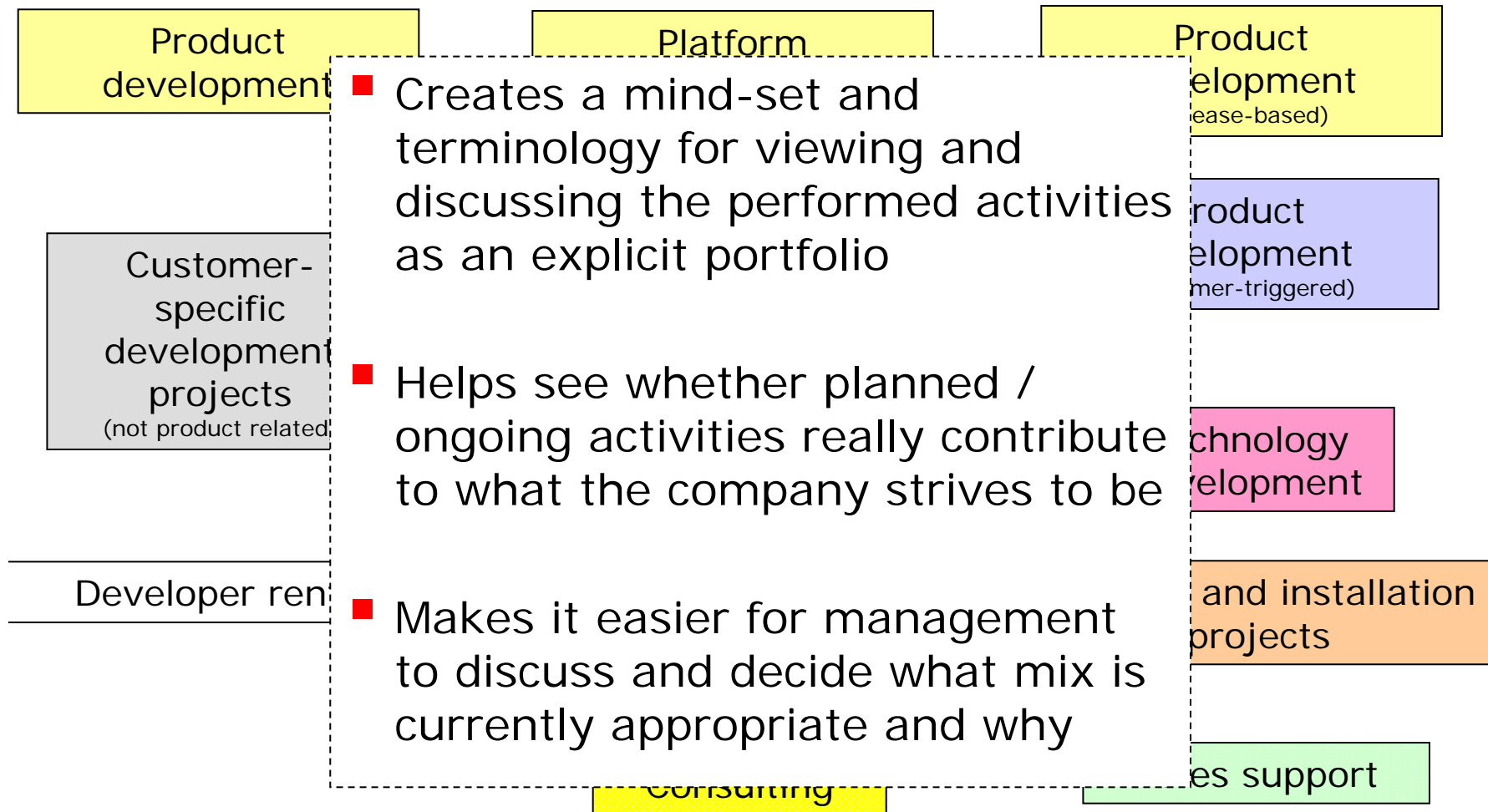
- 1) Identify the types of development activity
 - 2) Set target spending levels
-

1) Identify the Types of Development Activity

Achilles

Hector

Odysseus



2) Set Target Spending Levels

Achilles

Hector

Odysseus

- Decide how much should be spent on each activity type to reflect strategy and desired risk level
- Track how much effort is actually spent – and reflect on whether your spending / targets are appropriate

Consulting

Product
development
(release-based)

40%

Product
development
(customer-triggered)

15%

Technology
development

25%

Delivery and installation
projects

20%

Sales support

-

Agilefant: 1.5 Enzo (R&D): Joe!, Jack



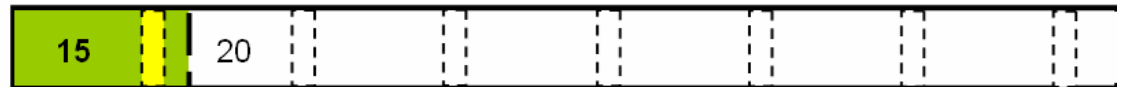
HyperCalendar: Google-plugin 1.0 (R&D): Jack, Jane, Jill!



Agilefant: Solving a problem at Customer A
(User support & Maintenance): Jill!



Agilefant: Roadmapping support for Customer B
(Customer-specific Product Development): Joe!, John



The Platform: Server optimisation (+ GUI Facelift later) (R&D): Jill(!), Jake



HyperCalendar: Warranty repair period for Customer B (User Support & Maintenance): John, Jill!, Jake

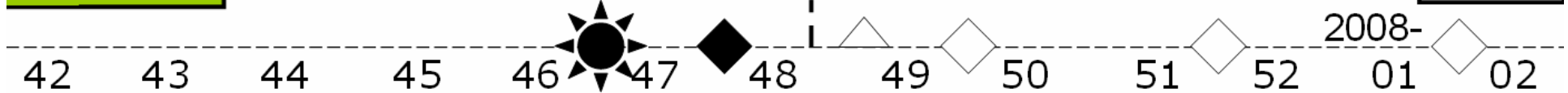


Self-improvement, Administrative tasks, Sales support (Misc. non-projected): John, Jack, Joe!, Jill!, Jane, Jake



26.11.2007

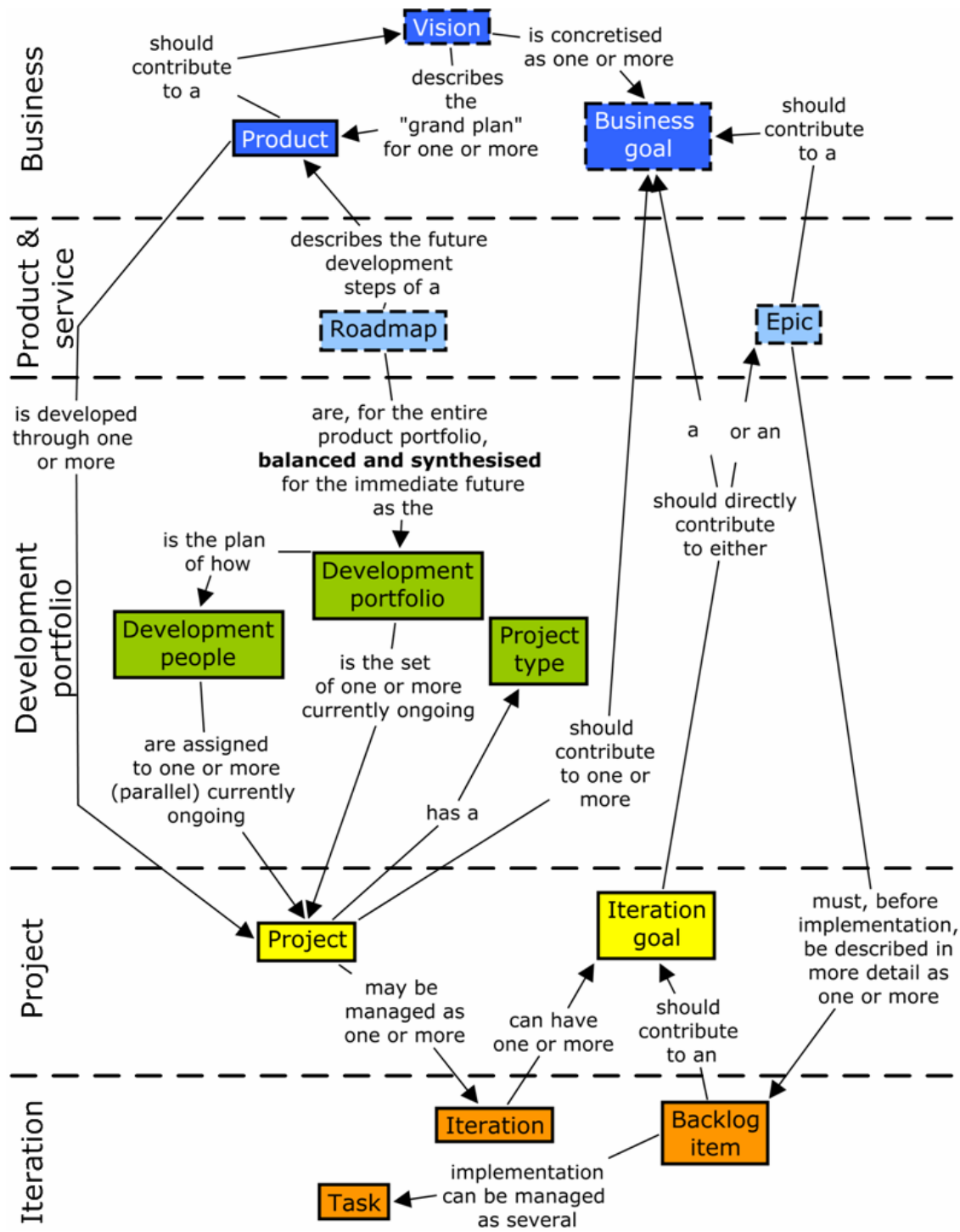
Agilefant: M



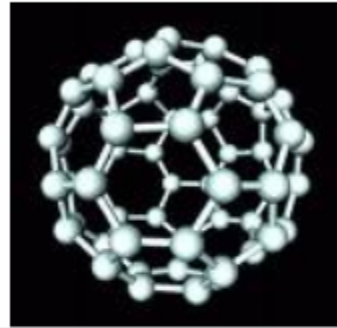
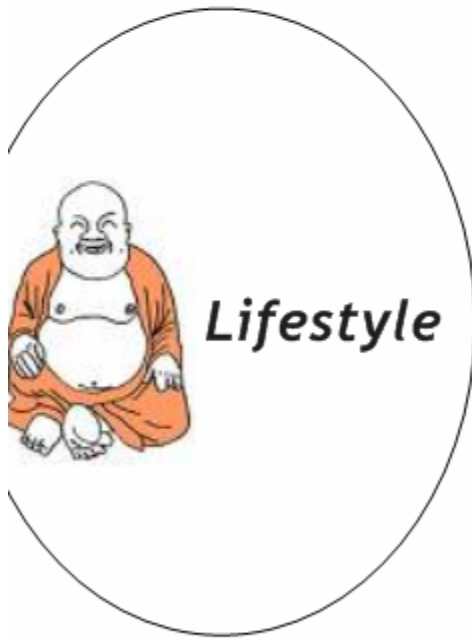
Mitä muuta tarvitaan?

(ainakin)

#2: An understanding of how to link long-term product & business planning to the developers' daily work



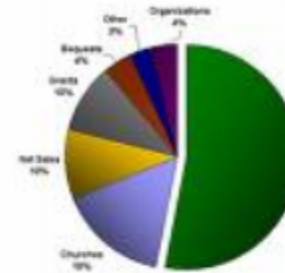
#2: Adequate development portfolio structure



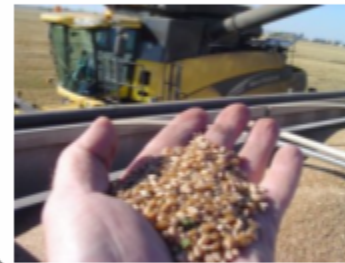
Development portfolio structure



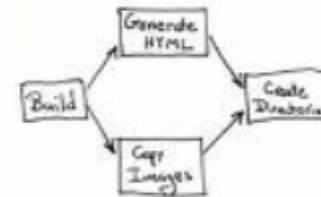
development activity types



Target spending levels



Criteria for selecting and prioritizing activities



Understanding of dependencies

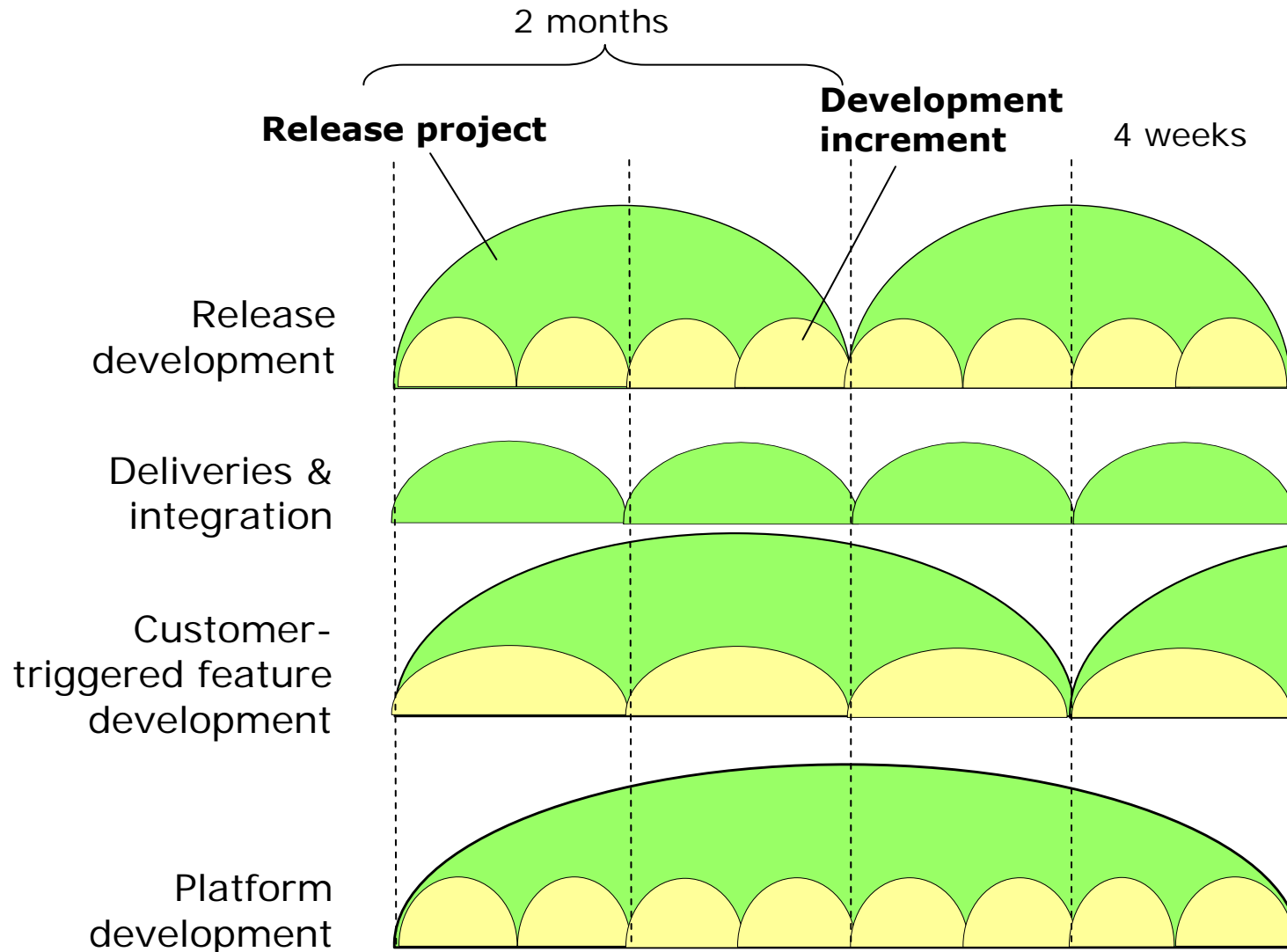


Development portfolio mgmt roles & responsibilities

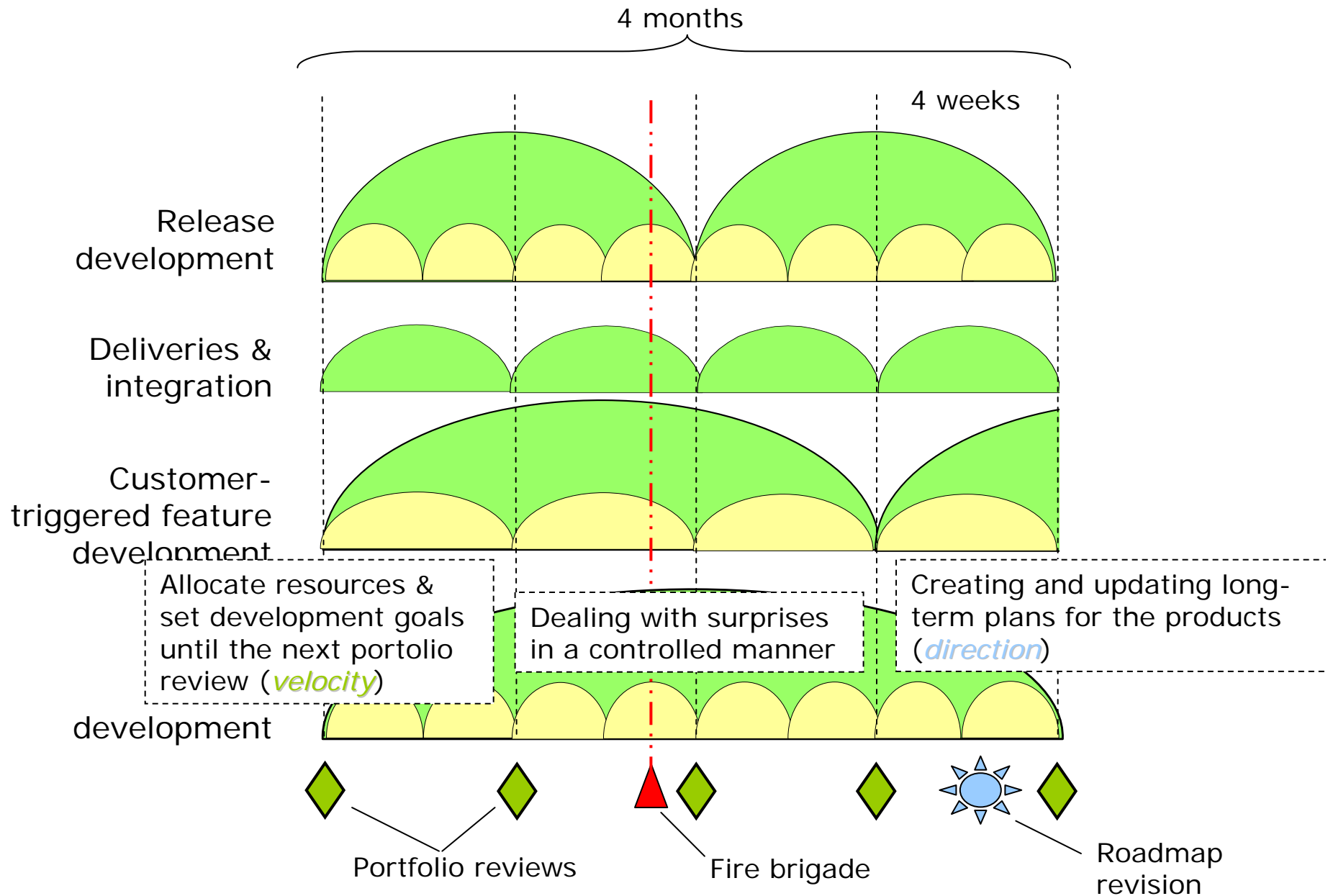


Development portfolio mgmt processes & practices

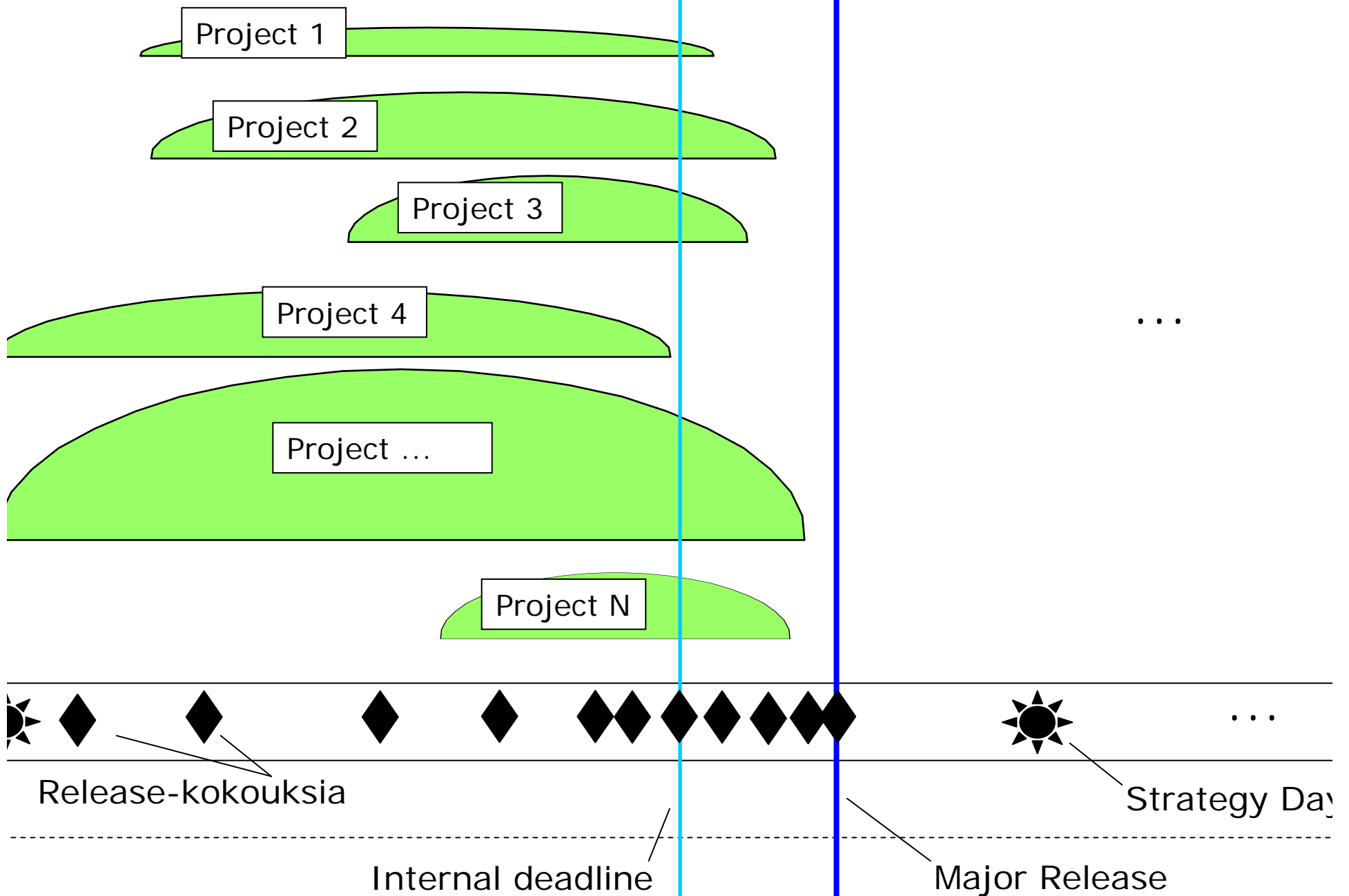
#3: A synchronized development portfolio



#4: The portfolio control points defined



Pari käytännön esimerkkiä alkutilasta: Case A



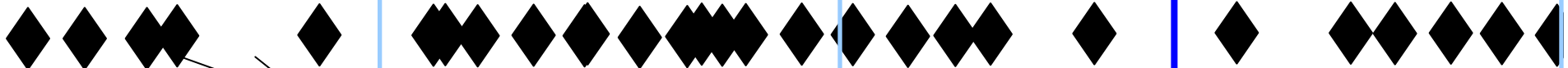
Case B

Uusi käyttö (? Planned / 18% Actual)

Hardiksen ohjain (? / 31%)

Vanhan platformin ylläpito ja jatkofiksailu (? / 13%)

Uuden platformin kehittäminen (? / 35%)



Tuotekehityksen johtoryhmän
kokouksia

(Irregular, semi-conscious portfolio review & roadmap
revision w/ ad hoc agenda and informal roles &
responsibilities)

Minor
Release

Major Release

**#5: Adequate
tool support**



#5: Some way to see how the Product & Business plans should link with the daily work

