



Introduction

Session 1

ICT Entrepreneurship

Dr. Slinger Jansen

Drs. Ravi Khadka



GX Creative Online Development

The screenshot shows the GX Software website interface. At the top left is the GX Software logo. Navigation tabs include CONTENT, TRAFFIC, and CONVERSIE. A search bar with the text 'ZOEK' is on the top right. Below the navigation is a main banner featuring a woman's face and a speech bubble that says 'Hoe laat ik mijn online resultaten fors stijgen?'. Below the banner are three blue arrows pointing right with the text '> MANAGE CONTENT', '> VERHOOG TRAFFIC', and '> MAXIMALISEER CONVERSIE'. Below these are logos for Schiphol Group, Reed Business, kpn, menzjs, and gemeente Eindhoven. A section titled 'Voor u geselecteerd' contains three items: 'Converteer bezoekers naar klanten', 'Direct meer resultaat met Visitor Conversion Management', and 'Nieuwe online omzet door ingebouwde e-commerce'. The 'Nieuwe online omzet door ingebouwde e-commerce' item has sub-points: '> Nieuwe Forrester studie GX Software' and '> Gemeente Den Haag heeft beste digitale loket'. To the right is a blue box titled 'Nieuwe Forrester studie over GX Software' with a link 'Lees het Forrester rapport!'. Below this is a small orange television icon. At the bottom is a 'GX PUBLIC' section with the text 'Speciaal voor de publieke sector' and 'Ontdek GX Public'. A large grid of client logos is displayed at the bottom, including kpn, ING, SNS Bank, Hispeed, Schiphol Group, Reed Business, vogel's, VanDerLande, RICOH, nationale nederlanden, delta lloyd groep, avéro, ochmeo, menzjs, SBS, 538, voetbal INTERNATIONAL, WP Sport Media, PEOPLE'S POSTCODE LOTTERY, Jeep, CHRYSLER, Mercedes-Benz, and de Lage Landen.

Est. 1995
By eight students, using the university infrastructure to build websites

Now:
Turnover of approx 15mln
150 people
2 int'l offices



Societal context

ICT innovations create **new products, services, companies, jobs, economic value, social value**

International:

Twitter

Google

SAP

Skype

Microsoft

Sage

Software AG

...

Netherlands:

TomTom

Planon

Acision

Servoy

GX

Exact

Unit4Agresso

...

What is Product Software?



A **Software Product** is defined as

*a **packaged** configuration of **software components**, or a **software-based service** with auxiliary materials, which is released for and traded in a specific **market***

Examples:

ERP software

Bookkeeping service

Operating systems

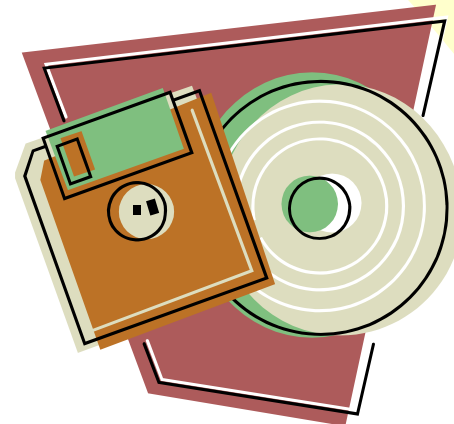
Desk-top publishing

Computer-aided design

Software development environments

Customer-relationship mgmt

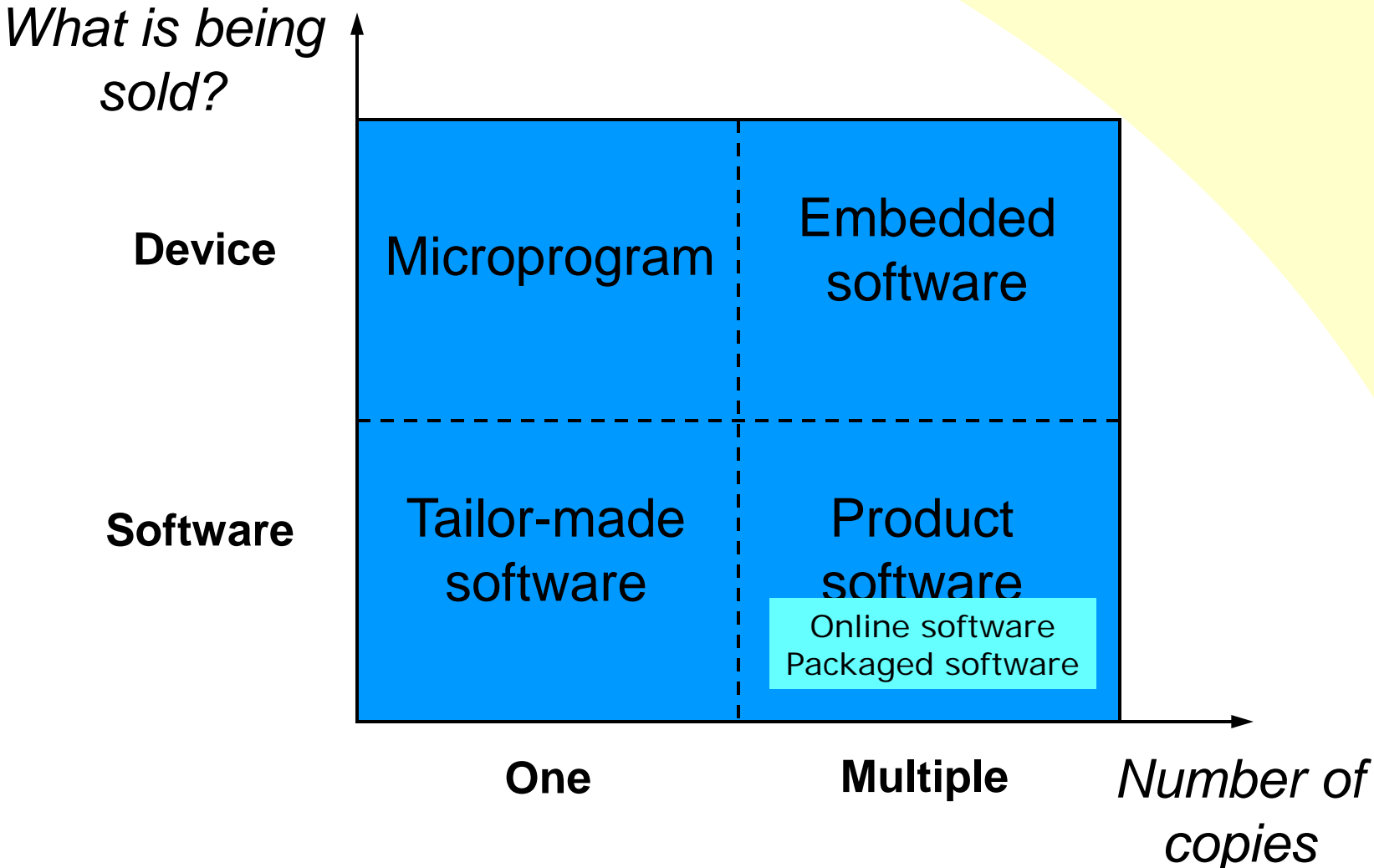
...



Essentially *all* software you are using in daily life and work ...



What is product software?



What is Product Software?



Examples of Software Product companies are:

International: Microsoft, Oracle, SAP, Google, ...

NL: TomTom, Exact, GX, Unit4Agresso, Planon, ...

Differentiate from:

- **Tailor-made** (or bespoke) software (large ICT service companies such as CMG, ATOS-Origin, CGEY, ...)
- **Embedded** software (consumer electronics, office machinery: Philips, Oce, AMSL, ...)

In the course ICT-Entrepreneurship the creation, production and organization of product software will be discussed and elaborated in depth



Key differences

1. Market introduction requires precise **synchronization** of dependable software engineering activities
2. The same product requires **installation and usage** in different organizations, with different **hardware and software platforms**
3. The vendor company stays **owner** of the software and auxiliary materials, while the usage is **licensed** to the customers



Software types

1. System infrastructure software

- Foundation of software stack
- Security, systems management
- Not industry or function specific
- Many in open source

Segments

- Operating systems
- Network, storage, security
- Utilities, anti-virus, archiving

2. Tools

- Development, execution
- Allow for composition, reuse, optimization

Segments

- Portal and collaboration: user interface infrastructure
- Information management: data layer
- Modeling and development: for application logic
- Execution and Integration platforms: execution of appl. logic

Software types (2)



3. Applications

- Used by information workers and end-users
- Bring some level of automation in business processes
- Most are industry or function specific
- Few in open source

Segments

- Office automation
- Horizontal business apps: finance&accounting, hrm, CRM
- Vertical business apps for industry specific solutions: billing, banking, travel reservations
- Technical applications: design and creation of physical products

4. Games and Consumer apps

- Consumer and professional games
- Strongest shift from packaged to online

Segments

- Offline: Home consoles, handheld consoles, computers
- Online: PC and mobile phones
- Consumer apps: editing of video and photo, hobbies

Economic context



OECD (2002): *"The product software sector is among the most rapidly growing sectors in OECD countries, with strong increases in value added, employment and R&D investment."*

EU

- 2.7 M employees

NL

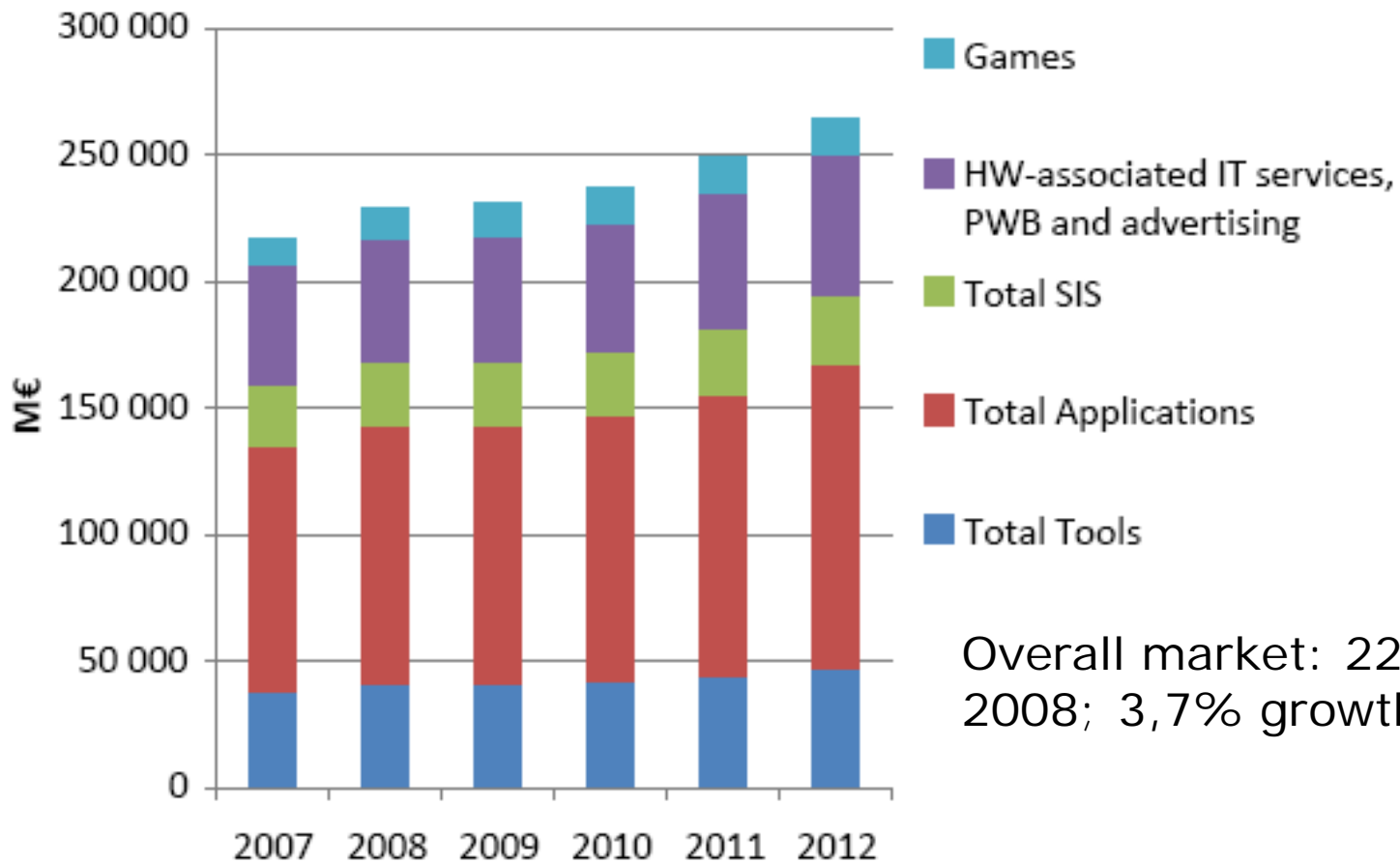
- Import 1,2 B€, Export 1,6 B€
- VS: 78% market share!
- NL: 40.000 employees in NL companies
- 16 % of 250.000 total ICT employment



European Software Market



SSBS - EU27

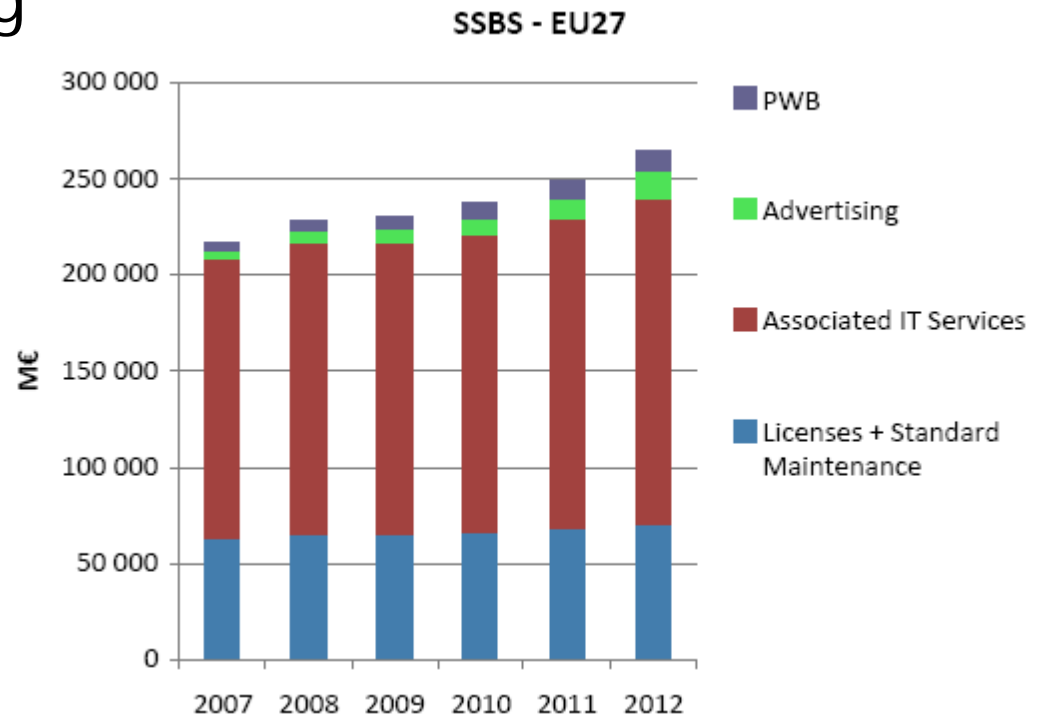


Overall market: 229 B€ in 2008; 3,7% growth/year



Software revenue model

- License and maintenance
- Associated ICT services
- Paid web-based
- Online advertising




Yunoo







ty.


Bespaar op
vaste lasten

Yunoo is veilig en
betrouwbaar 
[Lees meer over veiligheid >](#)

Volg Yunoo op het web

 Twitter  Facebook

 Hyves  Weblog

 Ga naar de help
[http://www.yunoo.nl/help >](http://www.yunoo.nl/help)

Est. 2007

Now: multi-million investment from Sanoma
12 employees
Started in ICT-E ☺
First office in CGN,
then Utrecht Inc,
now Low Valley

Netherware



NetherWare
ICT incubator for students
Utrecht

www.netherware.nl



Incubator role

- Netherware is an ICT incubator for *students* that provides *facilities* and *knowledge infrastructure* to develop an *ICT product* or *service* and to continue as an independent *start-up company*.



Netherware website

Utrecht University's
NetherWare
ICT incubator for students

Search this site

Home

Home

News

About Netherware

Educational Concept

Start-ups

2010

2009

2008

2007

2006

2005

2004

2002

Pictures

Partners

New Venture Information

Supervisory Board

Technology Partners

Useful links

Venture Partners

Contact

Kamer van Koophandel

Utrecht University

Utrecht University's



NetherWare



ICT incubator for students



Welcome To Our Website!

Welcome to the Netherware website! Here we will publish all the latest and hottest news concerning Netherware, the software incubator. With various innovative products to be released soon news may pop up when you least expect it.

The goal of Netherware is to enable student entrepreneurship in the ICT industry. Students can come with any idea for a product or service company, and elaborate this into a prototype with a business plan for a startup.

Netherware provides the following for the to-be entrepreneurs:

- teaching of courses in ICT entrepreneurship and business informatics,
- coaching of startup companies on strategy for the company, products and services,
- facilities to start a company: rooms, computers, internet, development tools, (web)servers,
- entrance to the network of financial and technology partners.



News topics

[Netherware Bedrijven Nieuws](#) Er is goed nieuws te melden: één van de eerste Netherware bedrijven Eitri, behaalde deze week haar 100ste klant. We feliciteren Eitri met het geweldige resultaat. [2008-04-24]Bron ...

Posted Dec 16, 2009 6:34 AM by Paulus Schoutsen

[Interview Campusradio](#) Op 21 juni is een interview met Slinger Jansen uitgezonden over Netherware en het vak ICT-Entrepreneurship. Klik op play om het interview te beluisteren. [2007-07-06]

Posted Dec 16, 2009 6:34 AM by Paulus Schoutsen

[Betabedrijvendagen UU \(NL\)](#) Op 6 maart vinden de BètaBedrijvendagen plaats in verschillende zalen van het Marinus Ruppertgebouw van de UU. Netherware zal hierbij ook aanwezig zijn. De BètaBedrijvendagen bieden je verschillende mogelijkheden om ...

Posted Dec 16, 2009 6:33 AM by Paulus Schoutsen

[Deputy Minister for Economic Economic Affairs Visit](#) On the 13th of November the Deputy Minister for Economic Affairs, Mrs. Karien van Gennip, visited the Board of Utrecht University for a meeting on science based entrepreneurship. During this ...

Posted Dec 16, 2009 6:32 AM by Paulus Schoutsen

[Advies van Exact](#) 9 December 2005 Press release, unfortunately for the international students it is in Dutch. Vrijdag 9 december 2005 heeft Arco van Nieuwland een bezoek gebracht aan Netherware. Als een van ...

Posted Dec 16, 2009 6:30 AM by Paulus Schoutsen

www.netherware.nl

Netherware



Examples

1. Hours accounting and invoicing for law firms
 2. Marketing tooling in messaging
 3. Warehousing for the retail industry
 4. On-line budget overview with community
 5. Student monitoring for schools
 6. Website to send SMS messages to groups
 7. Dancing lessons in a browser
 8. Camera placement for movie directors
- 20+ start-ups with 40 students (1 – 3 stud's)
 - Permanent software incubator with coaching and network access
 - Run by students
 - Start-up offices in department
 - UtrechtInc in the Kruyt building at the campus



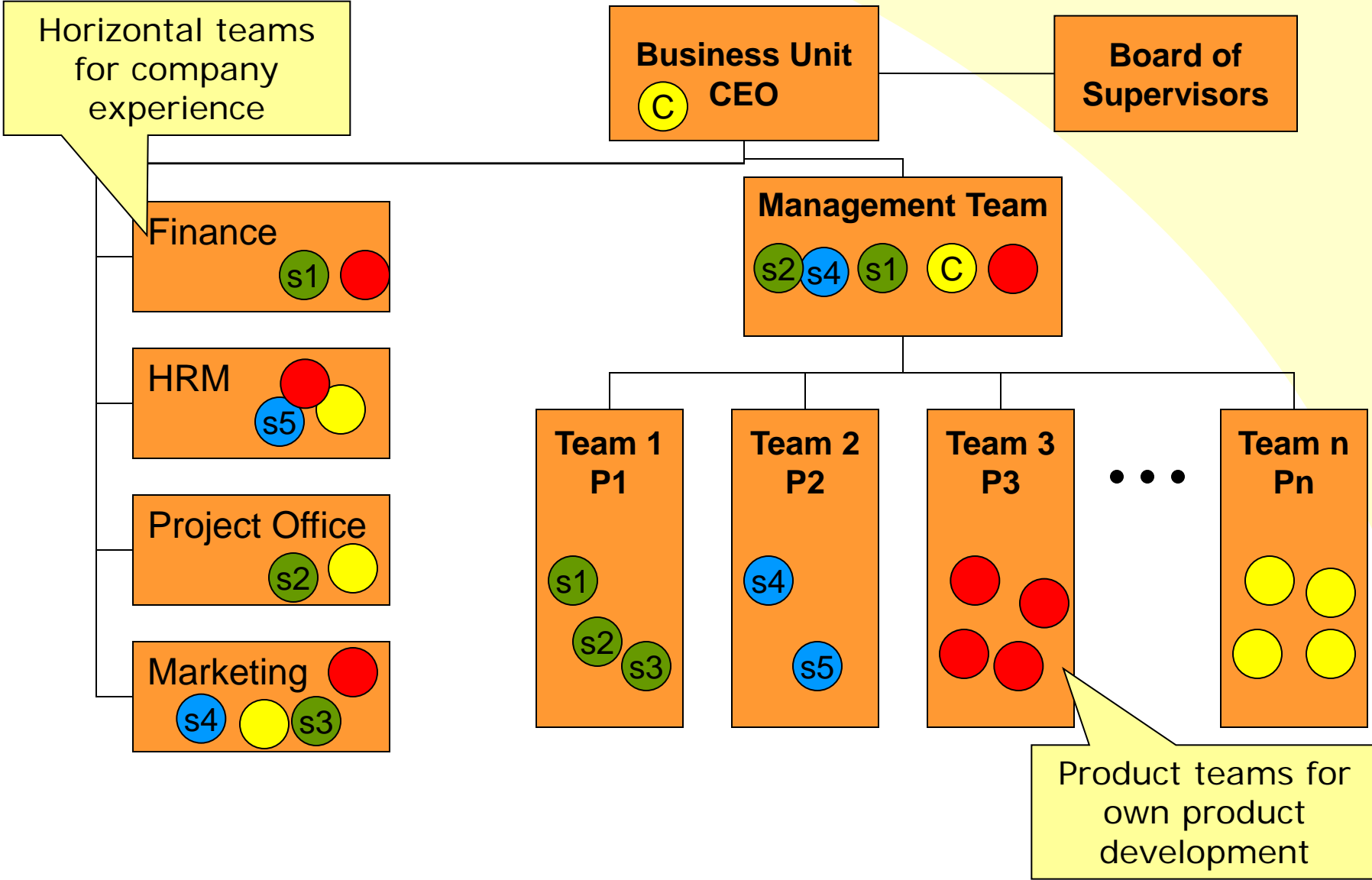
ICT Entrepreneurship

- The students develop their **own product** or **service ideas** in a self composed team
- Students play a **horizontal role** in a staff dept: HRM, Finance, Marketing, Project Office
- **Role play** in a virtual company as if there is **one year** in the company
- Mid review and End review for external **Supervisory Board**
- After the course, the students decide for continuation:
 - office in incubator
 - coaching and network
 - company registration

 - Course with Role Models



Course Organization





Product teams

Each product team:

- Works on **its own product idea** and functions as an **independent** product line
- Proposes a **project plan** within the ECTS boundary for the 10 weeks block
- **Reports** on the project plan; **adapts** planning
- Can elaborate on **anything viable** for a ICT product or service, related to the stage of the idea
 - Architecture
 - Software coding
 - Service definition
 - Webservice development
 - Product packaging
 - Business plan and company set-up
- **Innovation** is essential for selection and grading!



Horizontal teams

1. Human Resource Management and Internal communications
2. Finance
3. Project Office
4. Marketing and External Communications (external website)
5. CEO (one person per business unit)

Who does what?

Course milestones



- Deliverables as **assignments**: Product Definition, Market Plan, Project Plan, Business Model, Architecture, Business Plan, Prototype (see web site)
- All horizontals report **bi-weekly** to the lecturers, and prepare sections to the **Year-end report**
- Mid review to Board of Supervisors (BoS): 17 December 2010
- End review session with BoS: 4 February 2011
- The year-end report includes an **spin-out plan** for the next phase:
 - Which products will be **continued**: extended, modified,
 - Which products will be **discontinued**
 - Which products will be **nominated** for external financing



End review



All students present their products and business plans to **Board of Supervisors**

5 M€ Virtual Venture Capital

Members of Board of Supervisors

- Venture capital fund
- IT entrepreneur
- Institutional investment
- IT journalist
- Marketing specialist



Supervisory Board



- Merien ten Houten (founded nu.nl)
- Kevin Voges, Yunoo
- Rene van Erk, ISVWorld.com
- Floris Vlasveld, Deloitte
- Arco van Nieuwland, Yuki
- Robbert Hoefnagel, Fenceworks
- Marvin van Dongen, Horeko

- All have extensive experiences in ICT start-ups

Course Objectives



After this course the student should

- know what **developing** a software product entails
- be able to work with the **scientific theories** of product software
- be able to **start an own** software enterprise

Weekly



- 20 hours of work; 12 in Netherware
- Lectures to present and discuss scientific work on software products
- Guest lectures: Wim van den Brand, Kevin Voges, a.o.
- Students work on own product
- Horizontal work
- Progress reporting as in software firm: hours, deliverables, people, planning, risks, etc.
- Presentations by horizontals
- Preparation of review to Supervisory Board



Formation of teams

Formation of Netherware teams:

- Units and Product teams: **today 15.00hrs. BBL ???**
 - Provide your idea
 - Who is without idea?
- Horizontal teams: **Friday 11.00hrs.**
 - What do you like?
 - What are your talents?

Lecturers

- Slinger Jansen
- Ravi Khadka
- (Sjaak Brinkkemper)
- Wouter Westendorp



Study points

- 7.5 ECTS = 200 h
- $10 * 12$ contact hours = 120
- Remaining for own work = 80
(Rooms have been reserved on Thursday)
- Product team (75%)
- Horizontal team (25%)
- Presence as if working for a company!



Common Questions

- IP?
 - It's yours, as in beer.
- Office hours
 - We've never had to fire anyone yet (maybe Sjaak)
- An army of one?
 - It can be done, but generally with lower grades
- <http://www.cs.uu.nl/docs/vakken/ie/index.htm>



In this course you make the
difference!