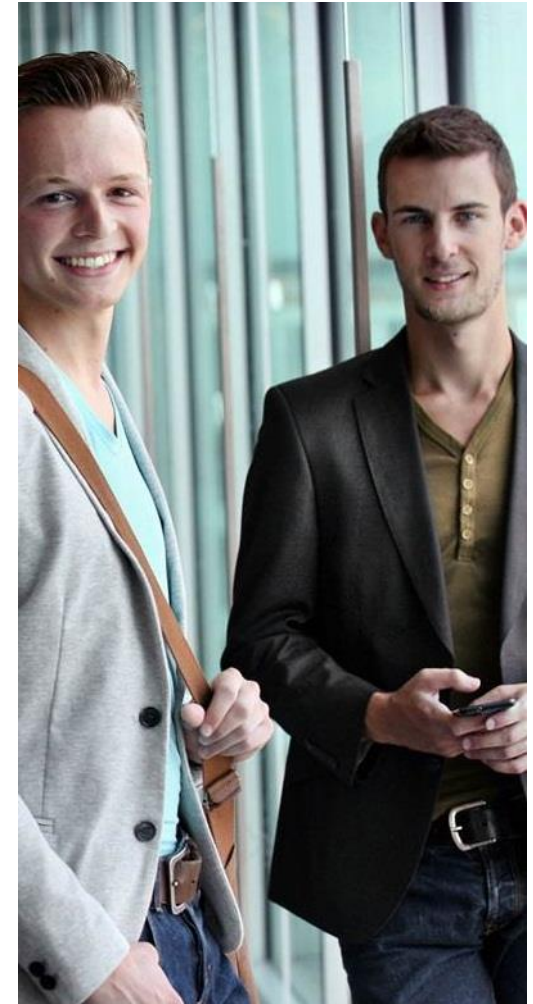


# Harmonising Curriculum



# Dutch University System (Applied Science)

- Every Bachelor degree has a national profile which include end terms and competences
- Every Bachelor study has his/her own local Professional Advisory Board
- National terms and competences are given local interpretation by this board and the educational staff



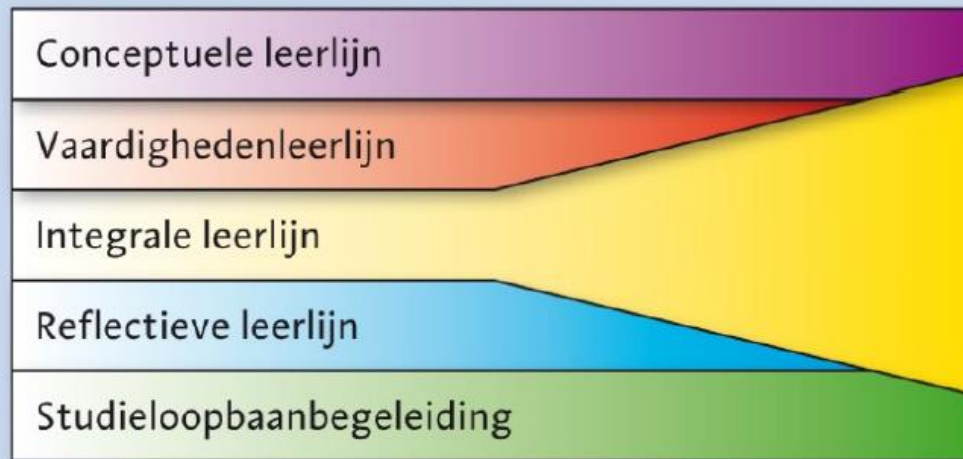
# Dutch University System (Applied Science)

- Dutch of Applied Science are used to working with 'project oriented education'
- Based on Social constructivism
- 'Proper' education exists of working on useful assignments. To make these assignments different learning lines are distinguishable  
*(Dick de Bie en Jos Kleijn)*



# Dutch University System (Applied Science)

## Frequently used Model



Learninglines of de Bie

# Educational Development

## How

- Integral learning line as backbone
- From basic up to complex
- Developing an educational outline starts with the integral learning line

## Pro

- More balance between different elements of the educational program
- More variation in working methods
- More structure for participants

## Central process:

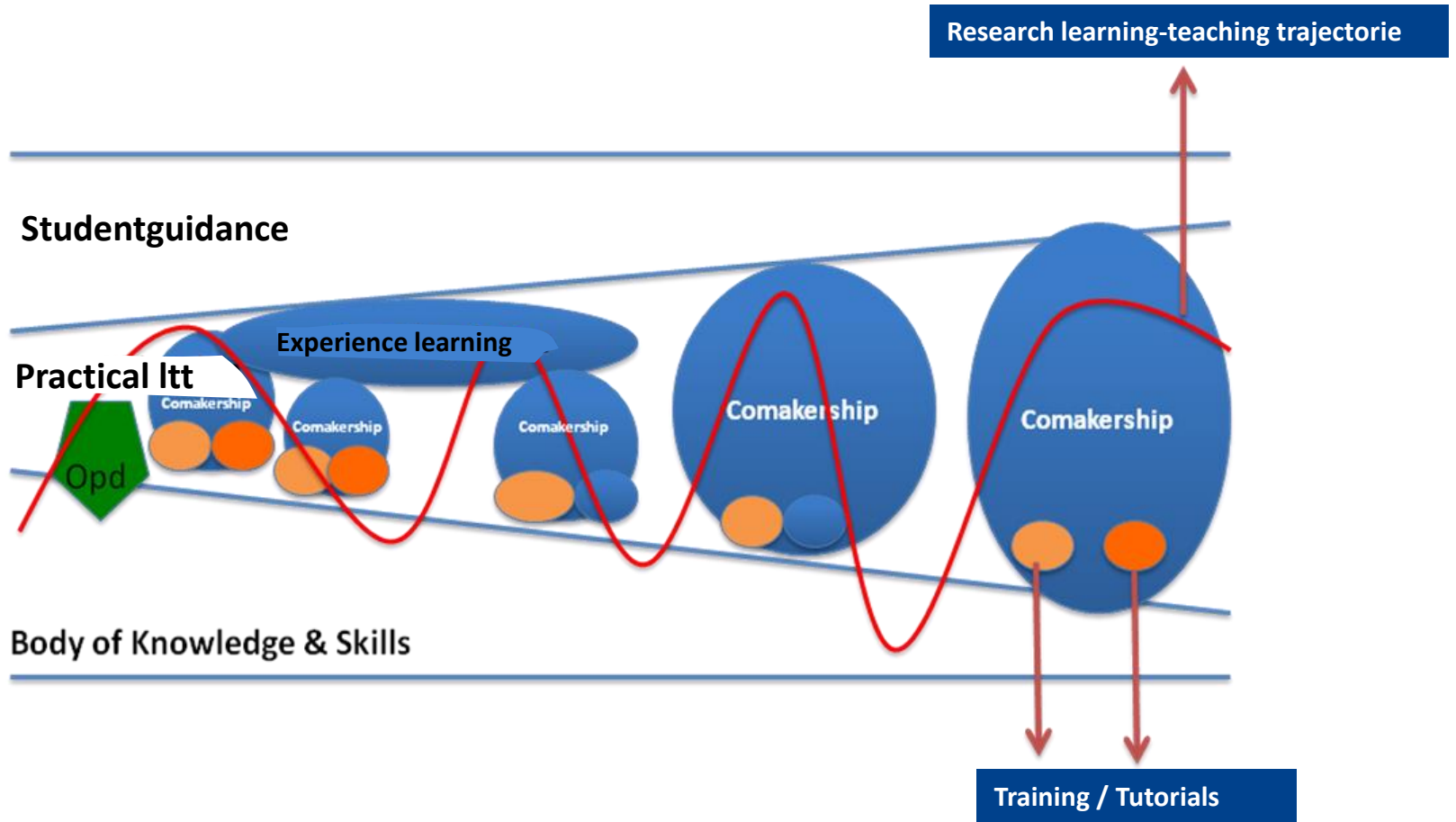
Not receiving information but convert or process information

## Strength:

Students develop competences via different learning activities



# Our Educational Model



- Assisted
- Simple
- Learning by experience
- Basis



- Independent
- Advanced



- Self-derecting
- Complex
- Learning by Producing
- Bachelor

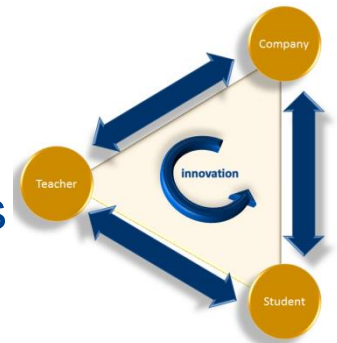
# Integral Learning line vs Comakership

## Integral learning line

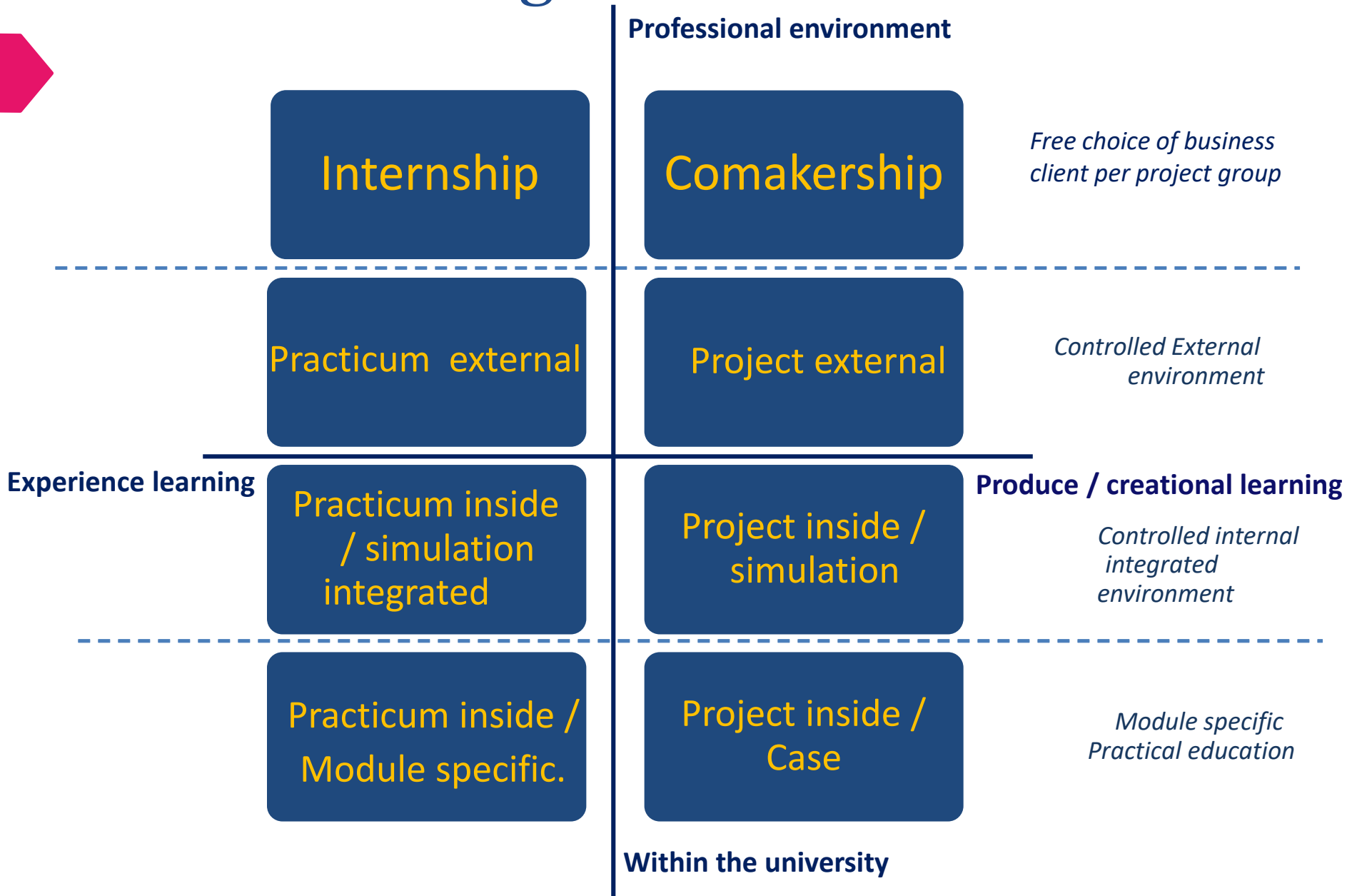
- Making a professional product or deliver a service
- Complex, professional, genuine, lifelike and recognizable

## Comakership

- Produce / creation of a professional product
- External business client with real current request
- Unique assignment per project group of 1 to 5 students
- Project based assignment with 20 weeks duration
- Students are working at the location of their Comaker company
- Accompanying educational courses (Body of Knowledge & Skills)
- Knowledge transferal between teacher, student and organization



# Practical learning





# Facilitating Comakership

acquiring assignment

## Conditions known

- Learning outcome
- Competences
- Results
- Work arrangements

## Obtaining Comakership

- Student finds
- Student applies
- University Facilitates

## Examination comity approves

- More than one teacher
- Check on content of the assignment
- Contract with organisation



# Facilitating Comakership

people involved

## External:

- Commissioning company
- Supervisor / coach of company

## Internal Teacher roles:

- Coach
- Assessor
- Lecturer / professional knowledge



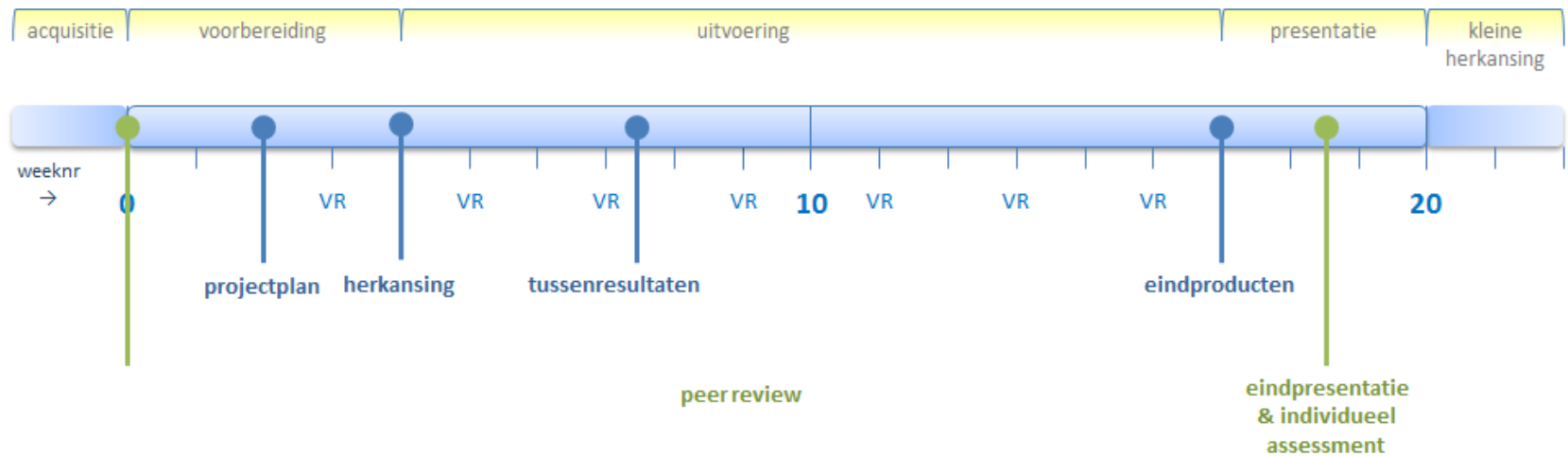
# Facilitating Comakership

20 week process

- Backbone of Comakership
- Content of assignments differ
- Process of every Comakership is equal
- Defined by every education
- Based on project management used in profession
- Next to professional products, students also deliver process documentation



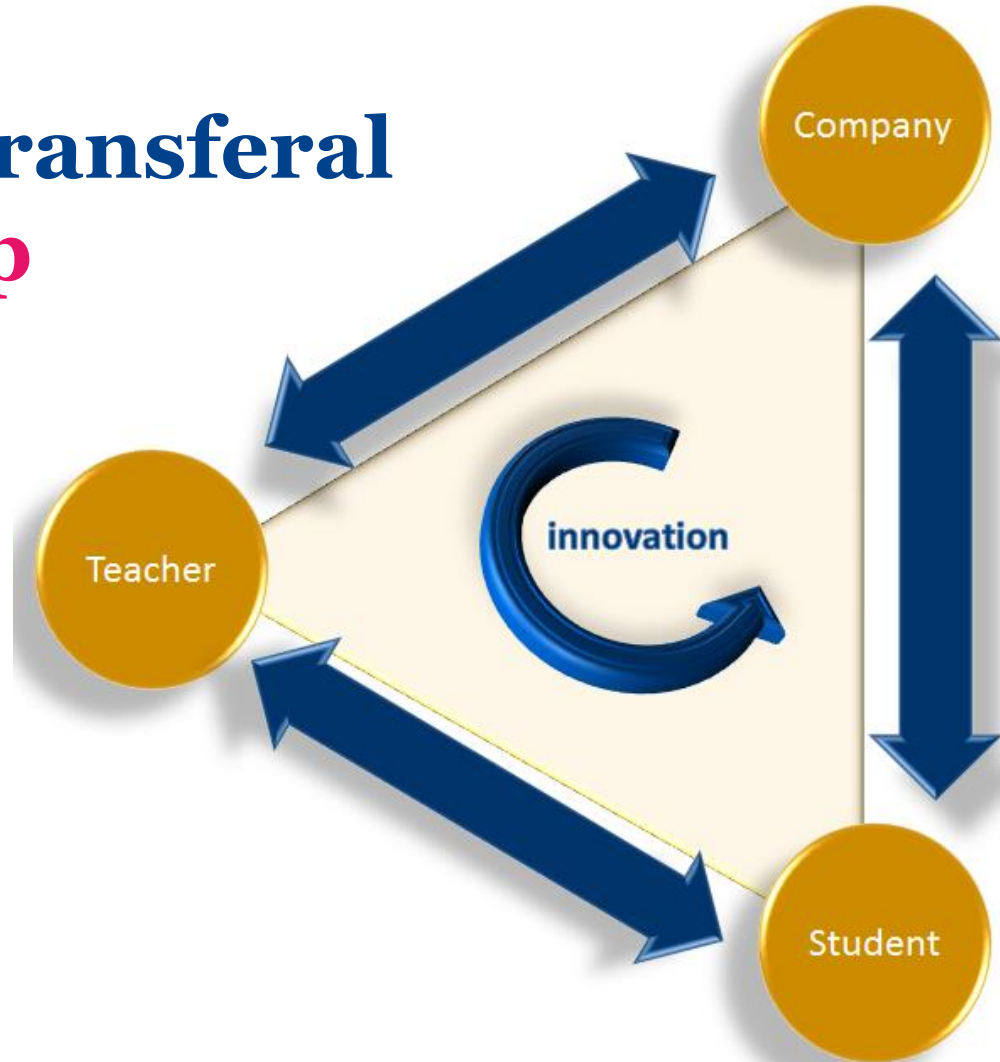
# Process Example Comakership



# Process Example Comakership

Kort Proces Overzicht		
Week nr.	Actie	Verantwoordelijk
Week 0:	eerste contact opleiding met bedrijf, definitie opdracht,	Coach (beoordelaar 1) Assessor (beoordelaar 2)
Week 1:	Kick off	Coach & betrokken vakdocenten
Week 2-4:	Projectplan+Feedback projectplan	Studenten & Coach
Week 2-18:	Twee wekelijks een voortgangsrapportage	Studenten
Week 7:	Deelproducten	Studenten
Week 9:	Peer review + Feedback coach	Studenten, Coach en evt. Assessoren
Week 10 :	Tentamenweek	Studenten
Week 12:	Herkansing deelproducten	Studenten
Week 14:	Feedback	Coach en evt. Assessoren
Week 17:	Deadline eindproducten + reflectie & betoog student + advies coach + advies praktijkbegeleider	Studenten, Coach, Praktijkbegeleider
Week 18/19:	Eindpresentatie aanwezig coach, assessoren, Praktijkbegeleider	Studenten, Coach, Assessoren, Praktijkbegeleider
Week 18/19:	Assessment individuele student	Assessoren en evt. student
Week 20:	Tentamenweek	Studenten
Week 21 :	Inleveren cijfers Comakerships	Assessoren

# Knowledge transferal Comakership





# Example Information Engineering

## Knowledge & Skills

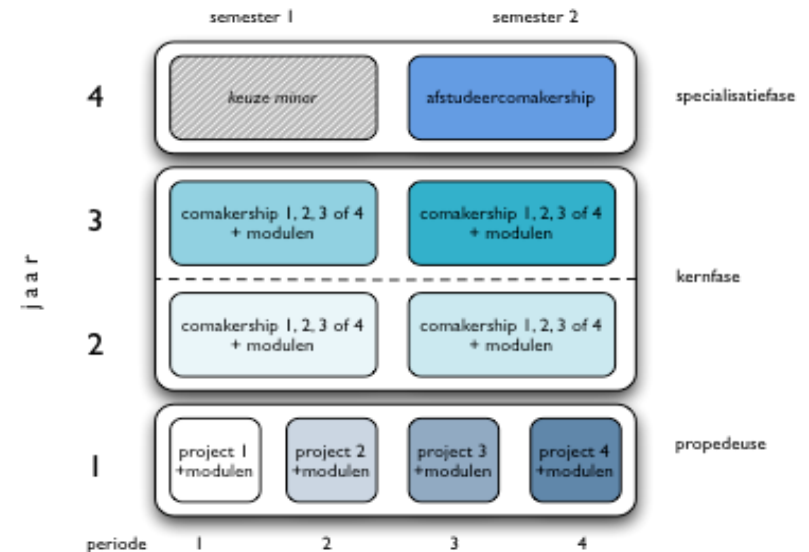
- Information Technology
- Business Knowledge
- Communication

## Method

- Comakership

## Programme

- 1<sup>st</sup> Year
- Core fase
- Specialisation



# Example Information Engineering

## 1st Year

Basic Knowledge, Skills and Behavior

## Core faze

Analyse & Model

Realise & Implement

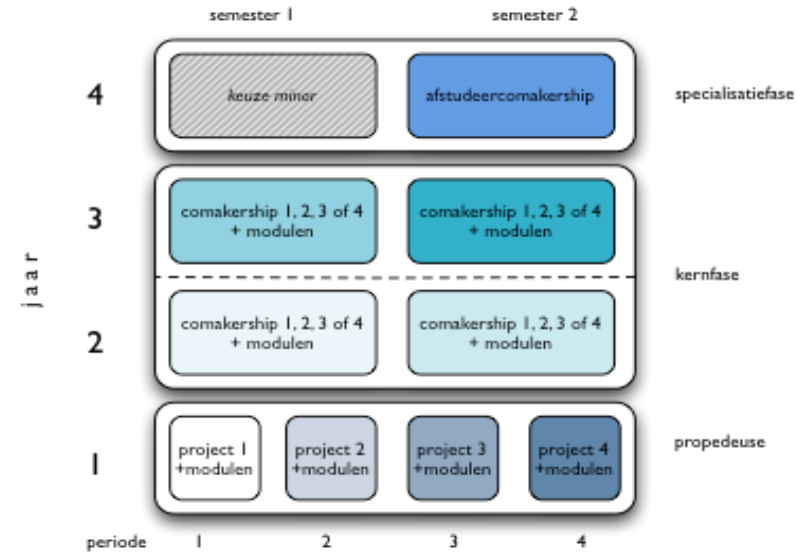
Multimedia & Communication

Organisational Change & Advise

## Specialisation

Knowledge- & Information management

Research & Development



# Example Information Engineering

First Year: Basic Knowledge, Skills and Behaviour

## Basic Project management:

Projects; in groups and individual  
Lectures  
Tutorials

## Basic Behaviour:

Workshops personal skills  
Workshops projectmanagement  
Personal development & Coaching

## Basic Knowledge & Skills:

Lectures and Tutorials about:  
Business Knowledge  
IT  
Communication  
Research

# Example Information Engineering

## Core Faze: Comakership Products

**Co 1: Analyze & Model**  
Requirements **Research**  
Functional Design  
Prototyping

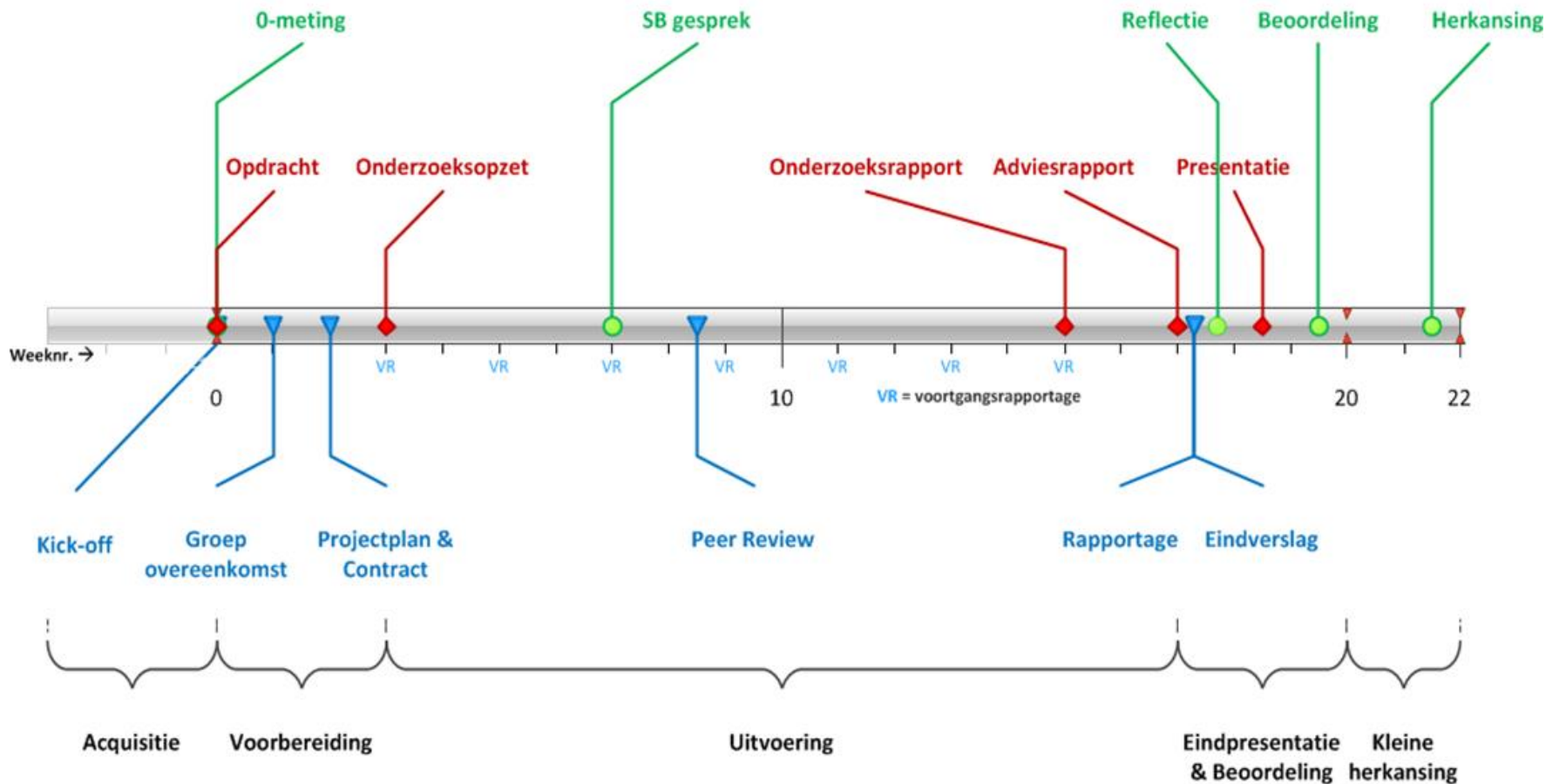
**Co 2: Realise & Implement**  
Technical Design  
Object Oriented Application  
Implementation Plan

**Co 3: Multimedia &  
Communication**  
Communications **Research**  
Multimedia Application

**Co 4: Organisational Change &  
Advise**  
**Research** of Business processes  
Advisory Report

# Example Information Engineering

## Core Faze: Comakership Process



# Example Information Engineering

## Core Faze: Rules of Engagement

Every Comakership Different Team

Every Comakership Different Company

Every Comakership Different Role in project team

Negotiate about own reward

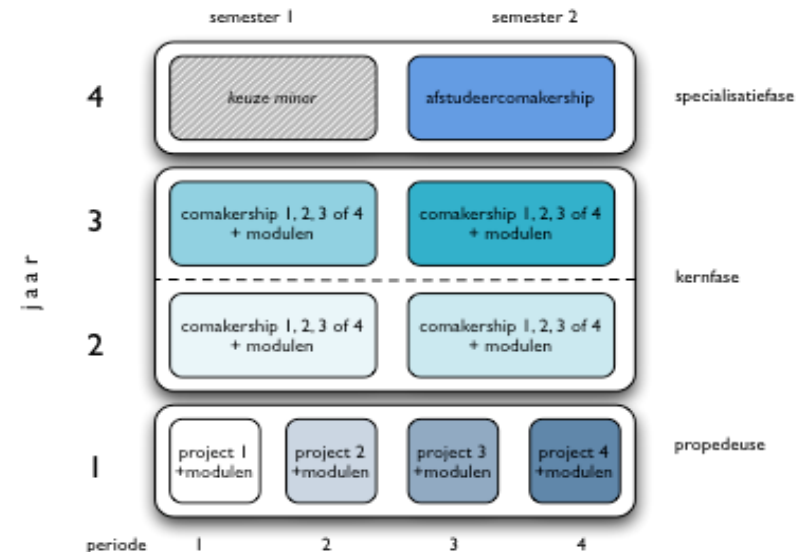
Find Suitable Comakership Assignment

Accompanying educational courses

Apply learned theory's and Skills

Weekly meeting with teacher coach

Weekly meeting with company coach

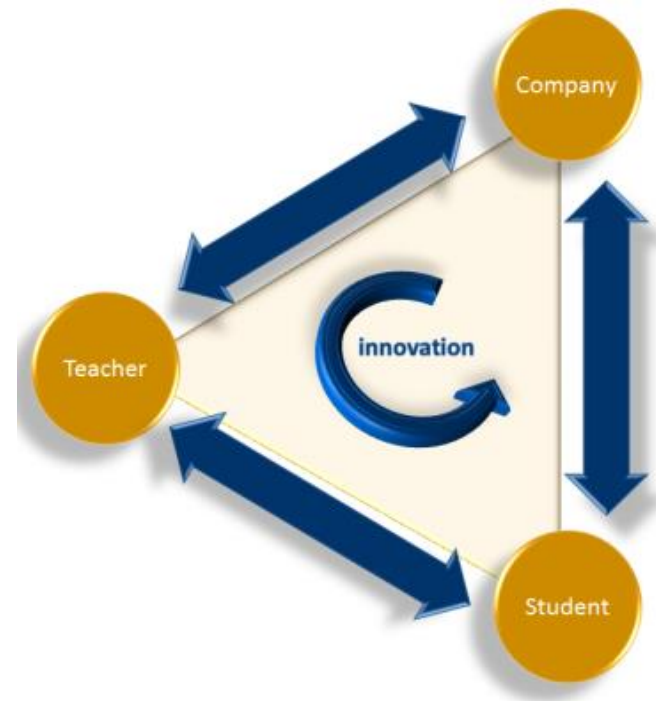




# Example Information Engineering

## Core Faze: Skills Stimulated

- Project Management
- Teamwork
- Independence
- Autonomy
- Result orientation
- Problem solving ability
- Researching skills
- Negotiation skills
- Commercial & assertive skills
- Entrepreneurial skills
- Creativity





ANY  
QUESTIONS  
?



# Definition Learning lines

## Experience & Reflection Learning line

- Professional activities in a real organisation
- Practice professional skills
- Reflection on this practice to learn

## Integral learning line

- Making a professional product or deliver a service
- Complex, professional, genuine, lifelike and recognizable

## Conceptual learning line

- Knowledge transferal
- Different theories
- Student can take action according to these theories

# Definition Learning lines

## Student Guidance

- Development of competences and collecting information for core tasks and work processes
- Insight into self and way of learning

## Skills line

- Combination of doing and getting feedback
- Targeted practice

# Facilitating Comakership

- Education defines project theme, learning results, preconditions and deliverables
- Education approves assignments according to learning outcomes en learning possibilities
- Teacher finetunes assignment together with company supervisor
- Clear projectdefinition and results
  
- Student defines personal goals for this specific Comakership
- Students are responsible for find their own Comakership assignment





# Facilitating Comakership

- Students are coached during Comakership by teacher and company supervisor
- Process is backbone of Comakership

