



MSc IB Information Management & Business Intelligence (IMBI)

Maastricht University, School of Business
and Economics

A couple of requests...

- ✓ Please *mute yourself* to avoid echoes.
- ✓ Please *switch on your camera*.
- ✓ Please *silence the alerts on your PC*
- ✓ If you have *questions* during the presentation, put them in the chat 😊!

Go
the extra
mile 





Dr. Mark Vluggen

- Senior lecturer information management
- Director of bachelor programmes at SBE
- Vice-chair department Accounting & Information Management
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Education

- Master: Cases in MIS (EBC4038)
- Postgraduate: EMFC (Maastricht), EMMA (Paramaribo, Suriname)

Research

- Enterprise resource planning (ERP), Online reviews, Technology Acceptance
- Member editorial board International Journal of Accounting Information Systems
- Track co-chair at European Conference on Information Systems

Today's Agenda

1

IT &
Business

2

Why this
programme?

3

Our
programme

4

Student
Profile

5

What does
the future
hold?



IT &
Business

```
3 require File.expand_path("../config/environment", __FILE__)
4 # Prevent database truncation if the environment is production
5 abort("The Rails environment is running in production mode!")
6 require 'spec_helper'
7 require 'rspec/rails'
8
9 require 'capybara/rspec'
10 require 'capybara/rails'
11
12 Capybara.javascript_driver = :selenium
13 Category.delete_all; Category.create
14 Shoulda::Matchers.configure do |config|
15   config.integrate do |with|
16     with.test_framework :rspec
17     with.library :rails
18   end
19 end
20
21 # Add additional requires below this line. Make sure to require any
22 # supporting ruby files with require statements in
23 # spec/support/ and its subdirectories. Files starting with "rspec"
24 # run as spec files by default. Files starting with "rails"
25 # in _spec.rb will both be required and run as spec files.
26 # run twice. It is recommended that you require any
```



Information Technology as a Fashion

- Enterprise resource planning
- Data warehousing
- Social media
- Cloud computing
- Green computing
- Big data & Data analytics
- The Internet of Things
- Blockchain technology



Blockchain in the media

IT Predictions

“I think there is a world market for maybe five computers.”

(Thomas Watson, chairman of IBM, 1943)

“There is no reason anyone would want a computer in their home.”

(Ken Olson, founder of Digital Equipment Corp., 1977)

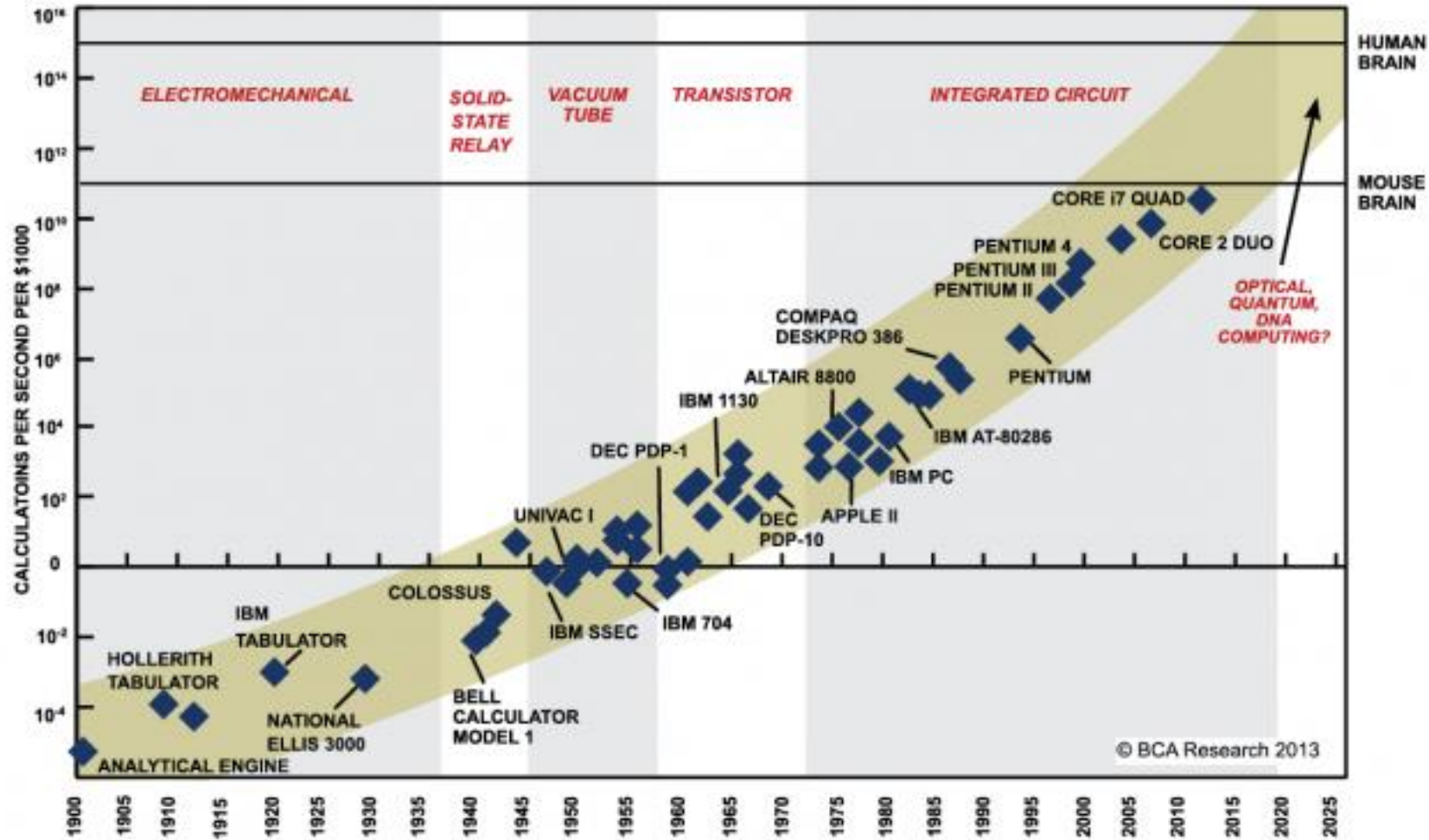
“I predict the Internet will soon go spectacularly supernova and in 1996 catastrophically collapse.”

(Robert Metcalfe, founder of 3Com, 1995).

“I see little commercial potential for the Internet for at least ten years.”

(Bill Gates, founder of Microsoft, 1994)

Moore's Law



SOURCE: RAY KURZWEIL, "THE SINGULARITY IS NEAR: WHEN HUMANS TRANSCEND BIOLOGY", P.67, THE VIKING PRESS, 2006. DATAPPOINTS BETWEEN 2000 AND 2012 REPRESENT BCA ESTIMATES.



Go
the **extra**
mile

Mainframe (80's) versus smartphone



Ease of Use

```
C:\>DIR C:\DOS\M*.EXE
```



Go
the **extra**
mile 



IT and Business: A Problematic Relationship





Some “Geeks”



Get Involved... or accept the consequences

Go
the extra
mile 

- IT investments not aligned with business strategy
- Prioritization of IT projects missing
- Lack of standardisation in IT-applications
- No return on IT investments
- 'Blaming & shaming'

Why this
Master?



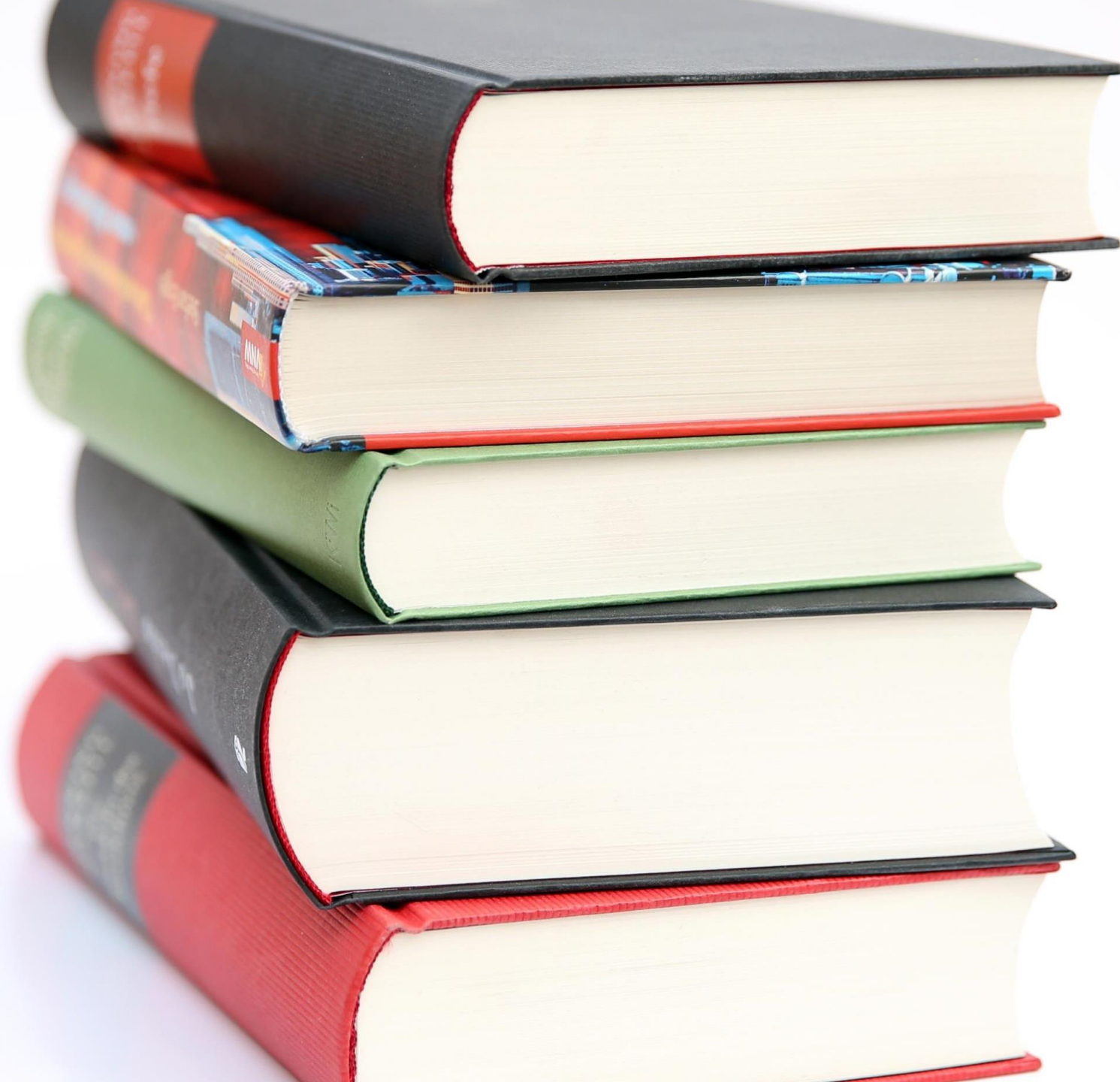
Why should you choose Information Management & Business Intelligence?

- Business today cannot function efficiently and effectively without information systems
- Business today needs efficient and fully automated decision-making tools
- There are unlimited possibilities for information systems & data analytics in organisations

Information Management vs Computer Science



	IM	CS
Focus	Organization	Software
Objective	More efficient or effective business	Reliable computer program
Core Task	Determine business requirements for information systems	Deliver information systems to meet defined requirements
Theoretical vs. Applied	Balanced	Applied
Typical Starting Job Title	Business Systems Analyst	Application Programmer
University Home	Business Schools	Science College, Technical Universities



Our
Programme

Information Management

- The Cost of IT: Managing an IT Budget
- The Value of IT: How to Measure It?
- Setting Investment Priorities
 - Innovation: Emerging Technologies (e.g. internet of things, cloud computing, gamification)
- Project management
 - Change management issues
 - The Runaway Project
- Vendor Partnering (e.g. cloud computing, outsourcing)
- Managing Outsourcing Contracts
- Managing the Applications Portfolio

Business intelligence / data analytics

 Go
the
mile **extra**

- 1970s: **Decision Support Systems (DSS)**
 - Executive information systems (EIS), online analytical processing (OLAP), dashboards/scorecards
- 1990s: New term: **Business Intelligence (BI)** (coined by Gartner): “a broad category of applications, technologies, and processes for gathering, storing, accessing and analyzing data to help business users make better decisions”
- Current era: **Data analytics**
 - Umbrella term similar to BI
 - The “getting data out” part of BI
 - The development of algorithms (e.g. machine learning, neural networks)
- BI versus data analytics:
 - ▶ BI: Business Users determine what question to ask, then IT structures the data to answer that question.
 - ▶ Example of BI tasks: Monthly sales reports, Profitability analysis, Customer surveys


 - ▶ Data analytics: IT delivers a platform to enable creative discovery, then Business Explores what questions could be asked
 - ▶ Example of data analytics tasks: Sentiment analysis, analysis of clickstream patterns

The screenshot shows a web browser window displaying a Business Insider article. The browser's address bar shows the URL: <https://www.businessinsider.com/the-incredible-story-of-how-target-exposed-a-teen-girls-pregnancy-2012-2?international=true&r=US&IR=T>. The Business Insider logo is in the top left, and navigation links for TECH, FINANCE, POLITICS, STRATEGY, LIFE, and ALL are in the top center. The article title is "The Incredible Story Of How Target Exposed A Teen Girl's Pregnancy" by Gus Lubin, dated Feb. 16, 2012, 10:27 AM. The article text discusses how Target used statistical tracking to identify pregnant customers. A red target icon is overlaid on a photo of a pregnant woman's belly. A "Report this ad" button and a "Why this ad?" link are visible on the right side of the page.

The Incredible Story Of How Target Exposed A Teen Girl's Pregnancy

Gus Lubin Feb. 16, 2012, 10:27 AM

Target broke through to a new level of customer tracking with the help of statistical genius Andrew Pole, according to a [New York Times Magazine](#) cover story by Charles Duhigg.



Pole identified 25 products that when purchased together indicate a woman is likely pregnant. The value of this information was that Target could send coupons to the pregnant woman at an expensive and habit-forming period of her life.

Plugged into Target's customer tracking technology, Pole's formula was a beast. Once it even exposed a teen girl's pregnancy:

[A] man walked into a Target outside Minneapolis and demanded

What is the specialisation structure? (Start: SEPT)

<i>Block</i>	<i>IB/IMBI</i>	
1	Data Management	Data Analytics
2	Cases in MIS	Elective
3	Skills Training: Writing a Master's Thesis	

What is the specialisation structure? (Start: SEPT)

Block	IB/IMBI	
4	Business Process Management	Writing the Master's Thesis
5	Business Intelligence Case Studies	
6	Completing the Master's Thesis	

Data Management

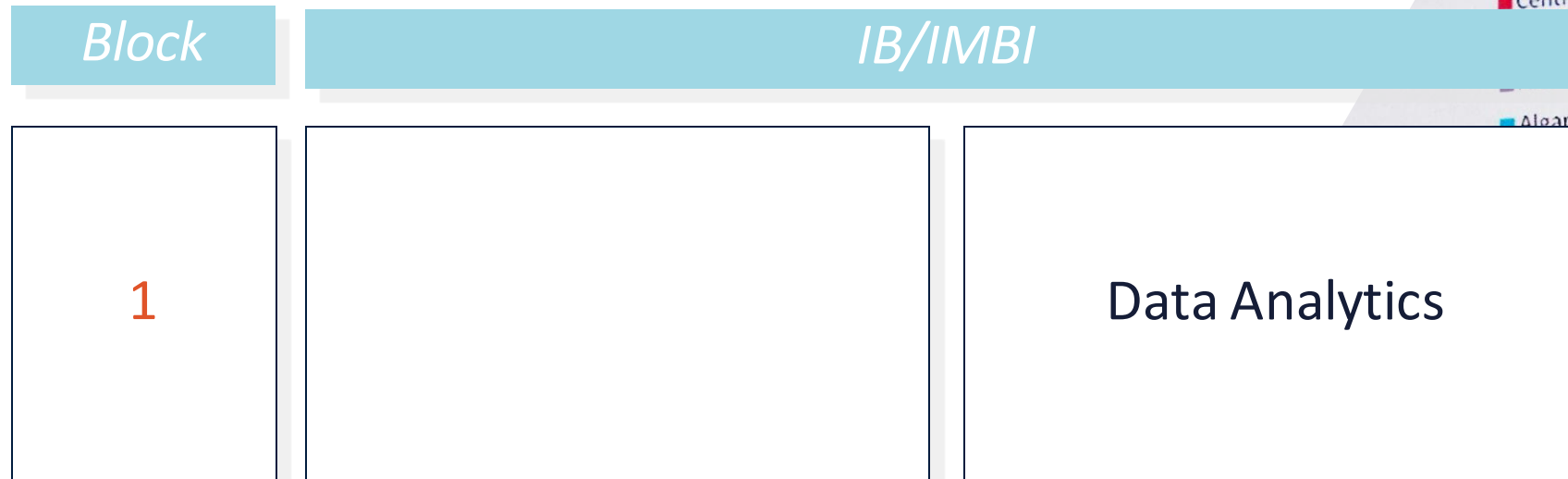
- Data Modelling and SQL
- Relational databases (first part of the course)
- New developments (e.g. Hadoop, MapReduce, second half of the course)
- Gain hands-on skills plus theoretical background

<i>Block</i>	<i>IB/IMBI</i>	
1	Data Management	



Data Analytics

- Quantitative methods for problem-solving and research
- Generate insights that improve management decision-making
- R language for statistical analyses



Cases in Management Information Systems

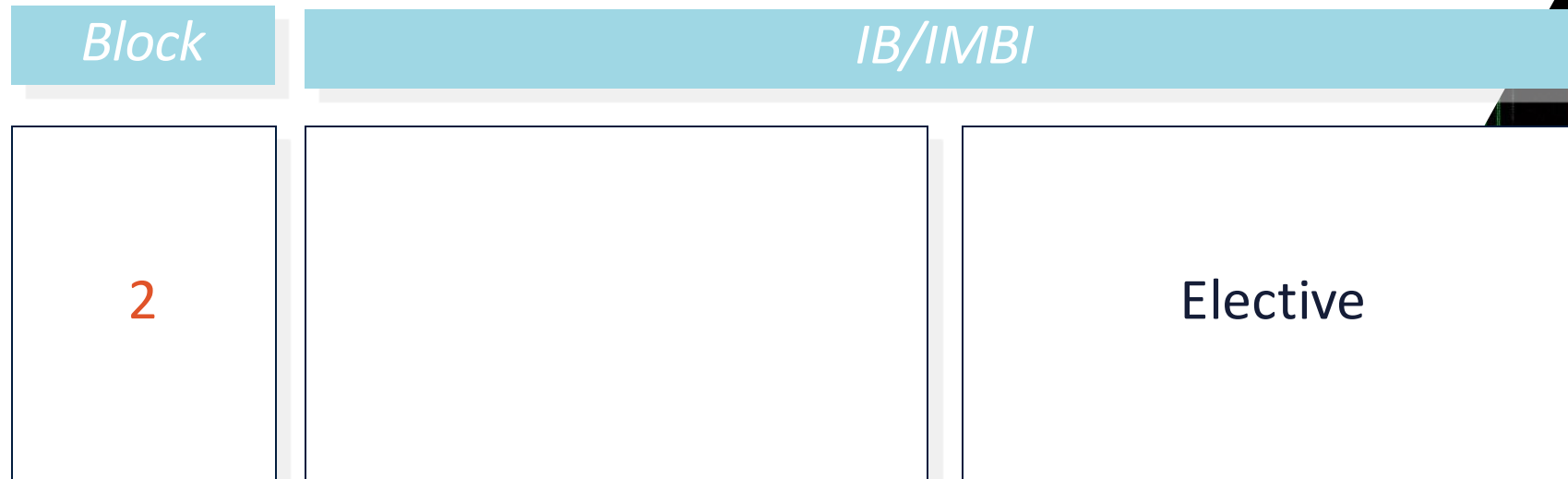
- Discuss how businesses can use information systems to improve their performance
- Use company cases and academic literature

<i>Block</i>	<i>IB/IMBI</i>	
2	Cases in Management Information Systems	



Elective

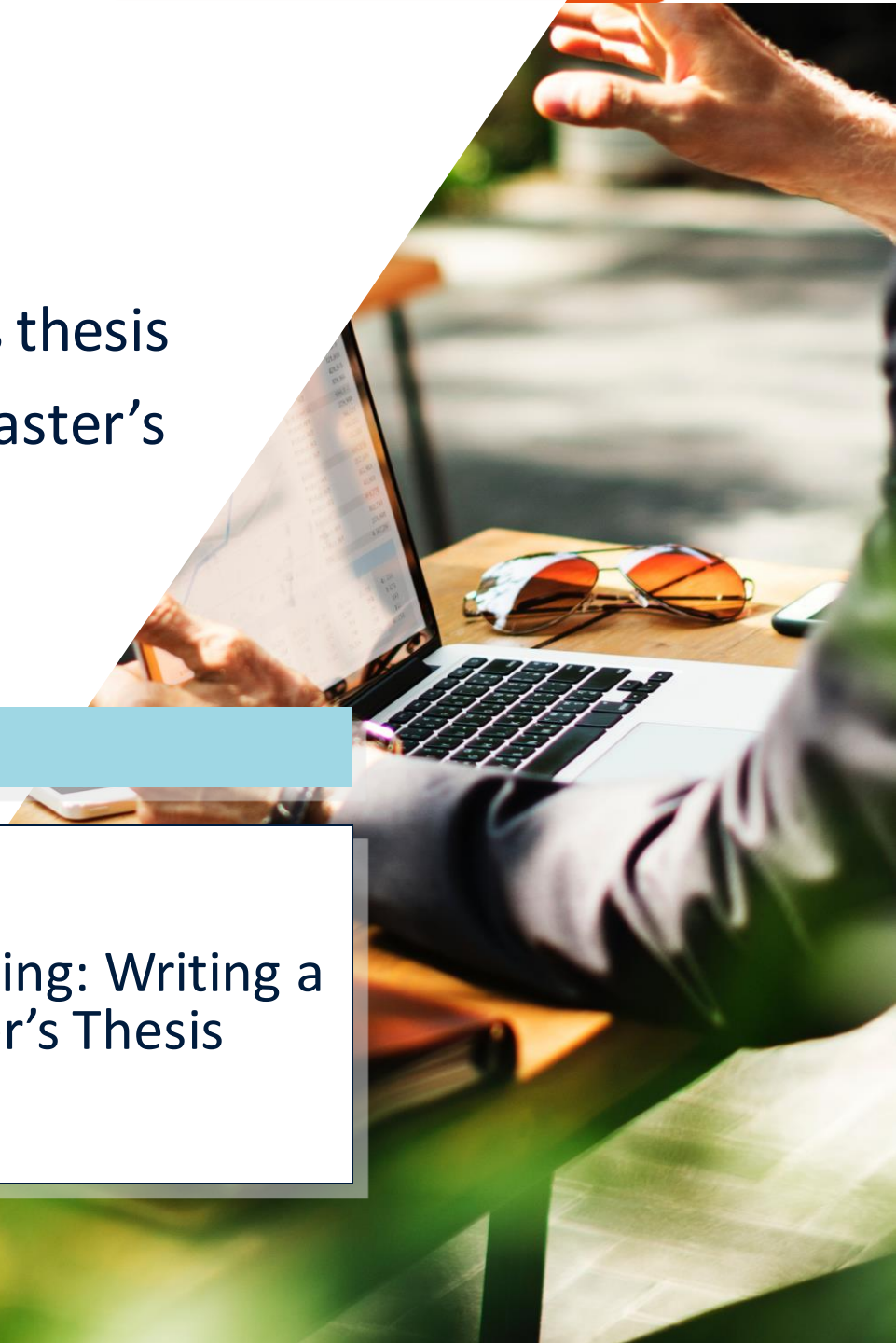
- Choose your own course from a wide range of options
- From another MSc IB Program
- Or: Multidisciplinary Business Challenge
- Broaden your horizon and go the extra mile



Writing the Master's thesis

- Understand the basic requirements of a master's thesis
- Develop a high quality research proposal for a master's thesis
- Apply for thesis supervision

<i>Block</i>	<i>IB/IMBI</i>	
3		Skills Training: Writing a Master's Thesis



Business Process Management

- Identify the different phases in the management of business processes
- Model complex business processes with BPMN
- Learn to communicate with domain experts and IT specialists on business processes
- Qualitatively and quantitatively analyze business processes and identify process improvement actions

Block

IB/IMBI

4

Business Process
Management



Business Intelligence Case Studies

Learn how to tackle real-life business problems, e.g.,

- Capacity planning in a hospital
- Implementing quality control in a hotel
- Customer segmentation at a bank

Block

IB/IMBI

5

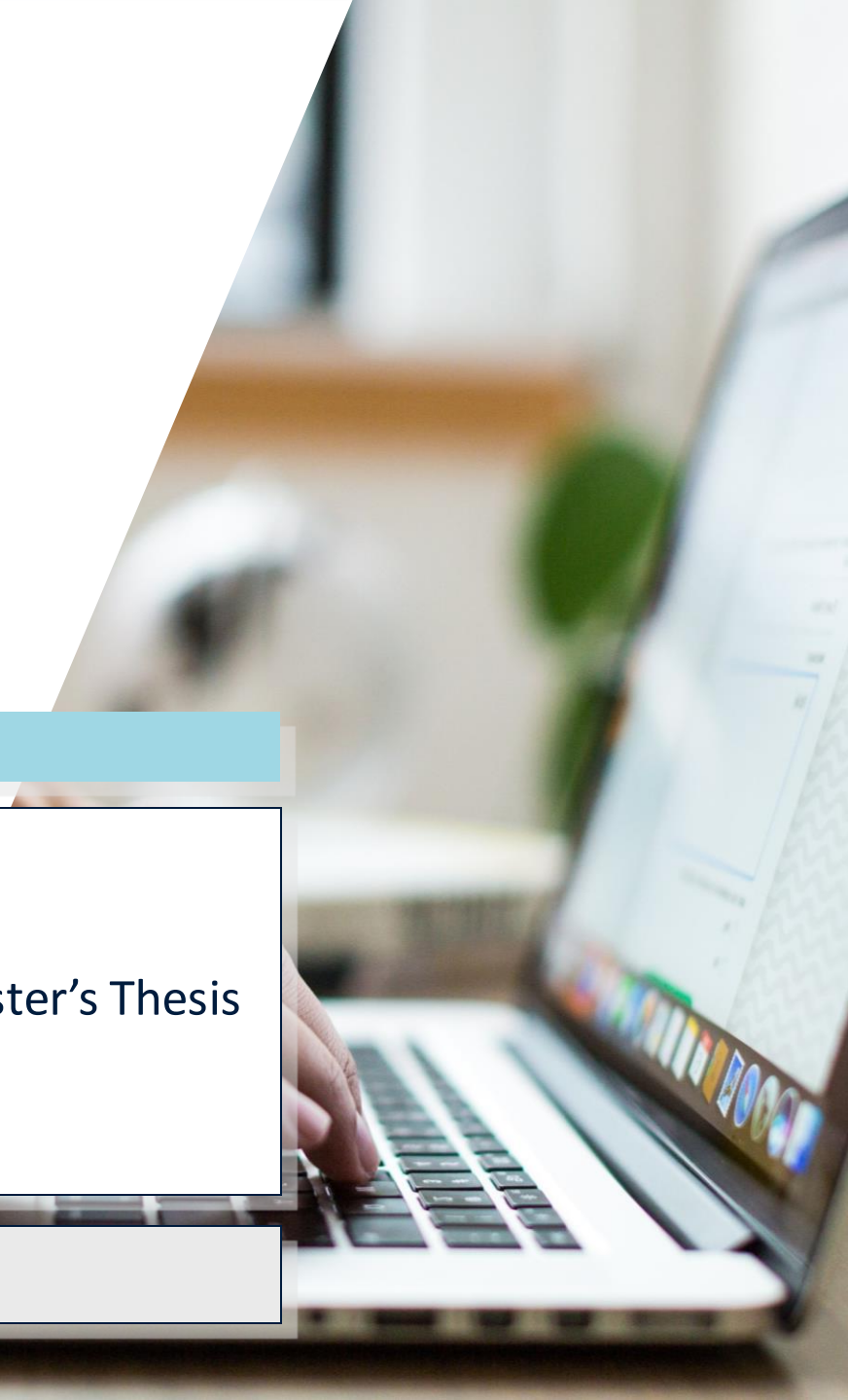
Business Intelligence
Case Studies



Master's Thesis

- In-depth study of an IM/BI problem
 - Academic relevance
 - Managerial relevance
 - Case study/internship possibilities
- Scientific study

Block	IB/IMBI
4	Writing the Master's Thesis
5	
6	Completing the Master's Thesis





Student
Profile

Have an affinity for quantitative reasoning, IT and its potential for organisations




Be able to think in a logical and structured way



Have the desire to study and work in an international environment



** Programming / technical / sophisticated mathematical skills are not necessary*



What does
the future
hold?

Job Prospects are Excellent

- **Typical starting positions of IM students**
 - IT Consultant (e.g. Accenture, IBM Consulting, PwC)
 - Data analyst (e.g. Henkel)
 - Systems Analyst (e.g. Shell, ING Bank, Cisco Systems)
 - Project Manager (e.g. ABN AMRO)
 - IT vendors (e.g. SAP, Google)
 - Startup (e.g. SpamExperts, i2 Solutions)
- **Further down the career path**
 - Manager of the IT function in an organisation
 - Chief Information (Knowledge) Officer

Go
the extra
mile 

Do you have any
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questions?