

# MSc IB Information Management & Business Intelligence (IMBI)

Maastricht University, School of Business  
and Economics





## **Dr. Mark Vluggen (track coordinator)**

- Senior lecturer information management
- Director of bachelor programmes at SBE
- Vice-chair department Accounting & Information Management
- E-mail: [m.vluggen@maastrichtuniversity.nl](mailto:m.vluggen@maastrichtuniversity.nl)

### **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/initializers/spec_helper.rb", __FILE__)
4 # Prevent database truncation if the environment is production
5 abort("The Rails environment is running in production mode!") if Rails.env.production?
6 require 'spec_helper'
7 require 'rspec/rails'
8
9 require 'capybara/rspec'
10 require 'capybara/rails'
11
12 Capybara.javascript_driver = :webkit
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 support files
22 # Requires supporting ruby files with support/ directory. Files in the support/
23 # spec/support/ and its subdirectories. Files starting with "rspec" are auto
24 # run as spec files by default. This will not work if the directory is not
25 # in _spec.rb will both be required. Files starting with "rspec" are auto
26 # run twice. It is recommended that you do not use "require" in your
27 # spec.rb. You can configure this behavior by using the "require" option in
```



# 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)*

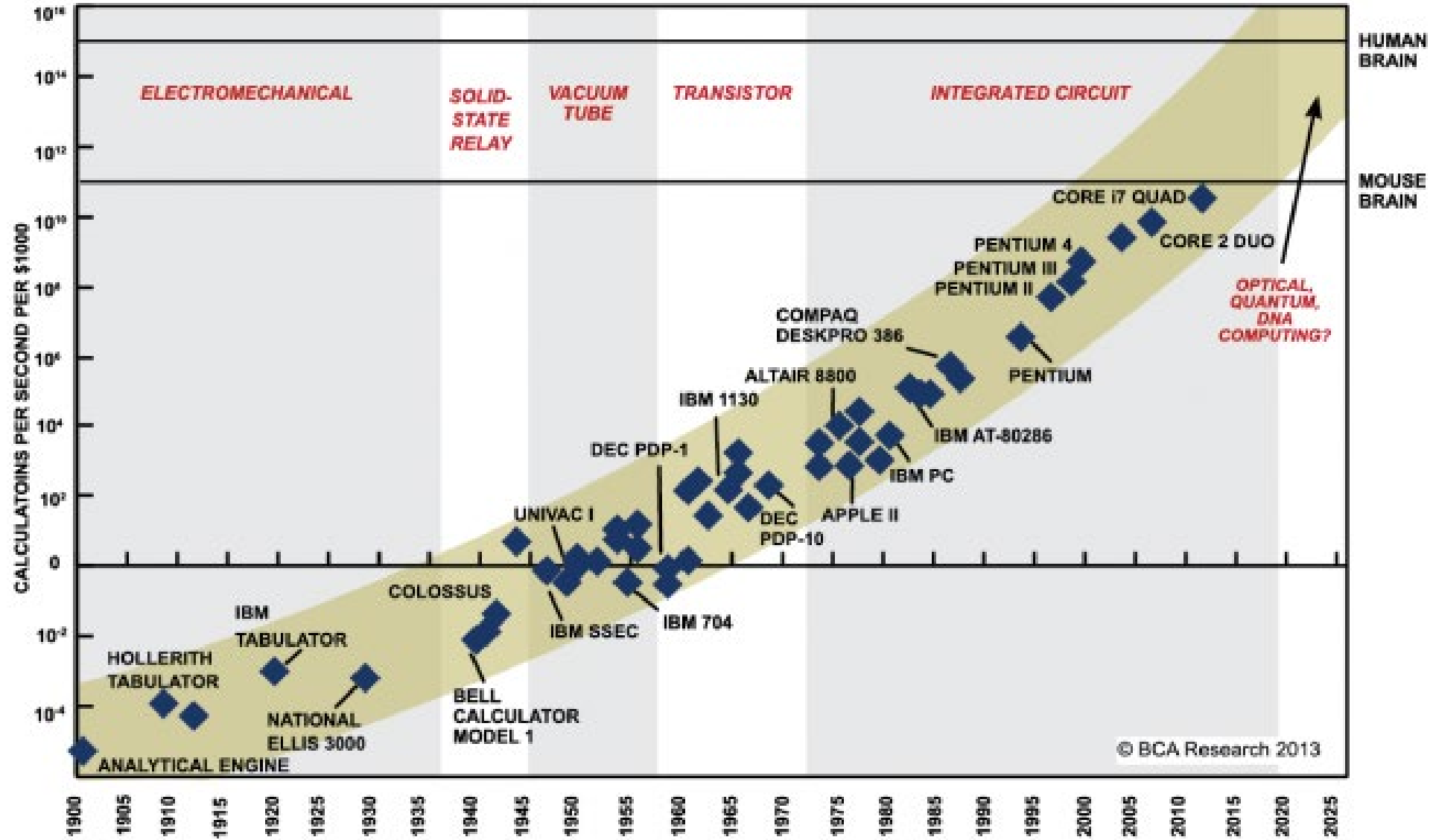
“I predict the Internet will soon go spectacularly supernova and in 1996 catastrophically collapse.”

*(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 WYKING PRESS, 2006. DATAPPOINTS BETWEEN 2000 AND 2012 REPRESENT BCA ESTIMATES.





# Mainframe (80's) versus smartphone



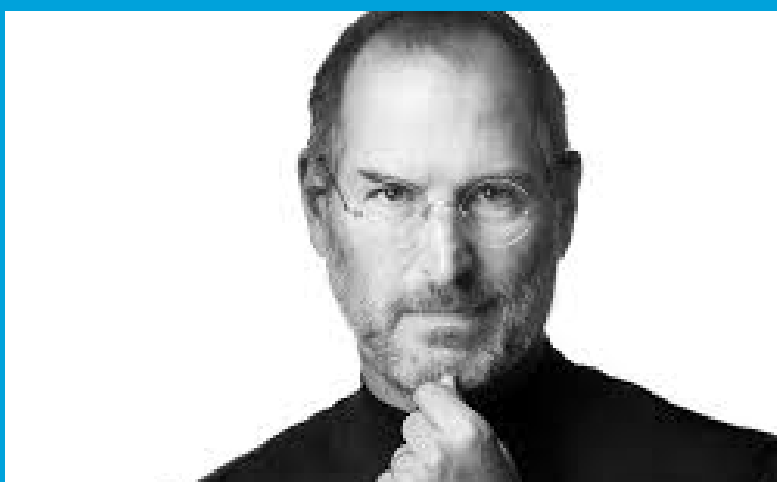
# Ease of Use

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

IT and Business:  
A Problematic  
Relationship



# Some “Geeks”



## Get Involved... or accept the consequences

- 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'

A large, multi-story brick building with a prominent gabled roof and numerous windows. A modern glass extension is visible on the right side. The building is set against a clear blue sky and lush green trees. In the foreground, there is a concrete walkway and a glass-enclosed area with some greenery.

Why this  
Master?

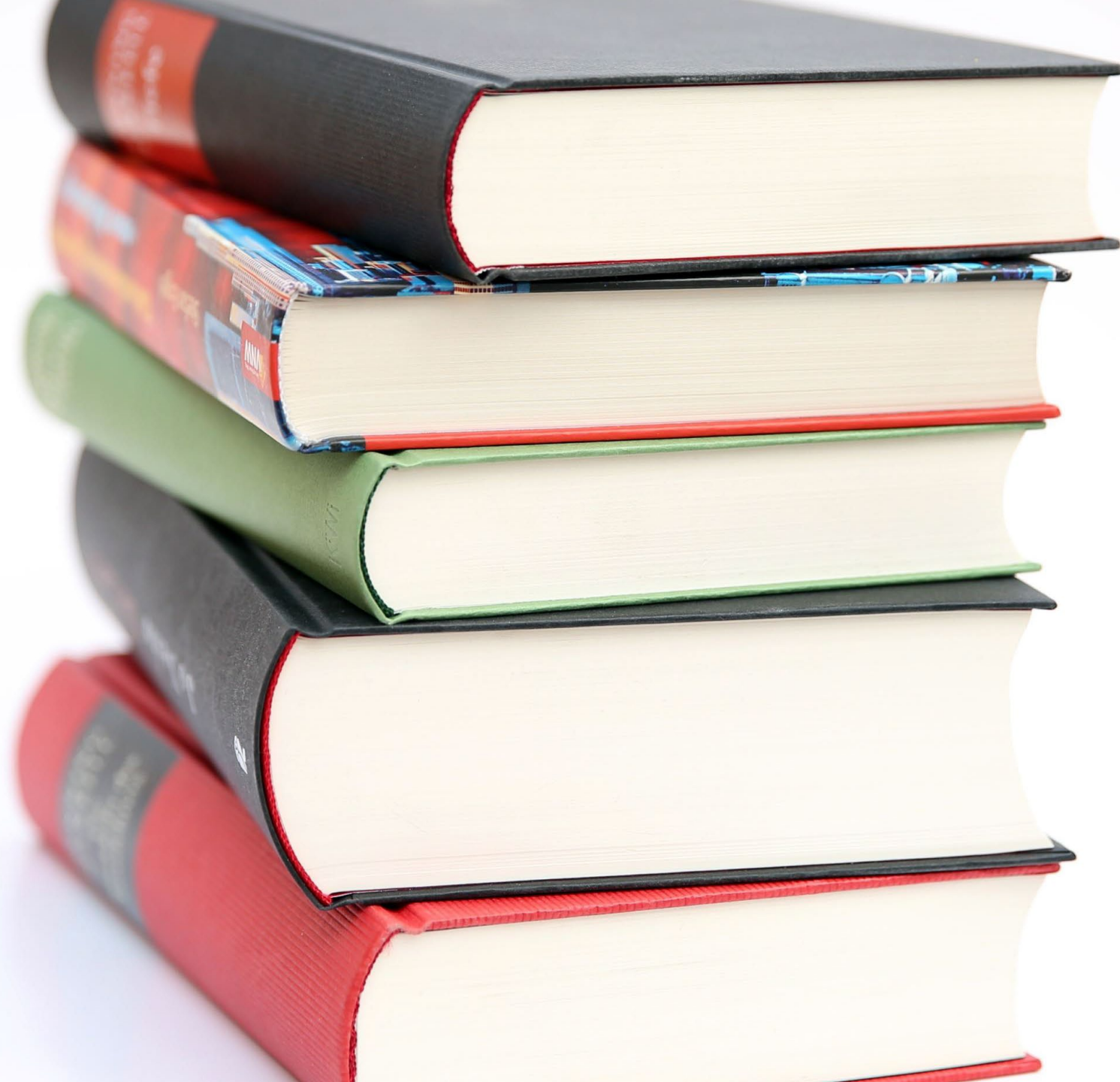
# Why should you choose Information Management & Business Intelligence?

- 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

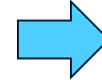
	IM	CS
Focus	Organization	Software
Objective	More efficient or effective business	Reliable computer program
Core Task	Determine business requirements for information systems	Deliver information systems to meet defined requirements
Theoretical vs. Applied	Balanced	Applied
Typical Starting Job Title	Business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



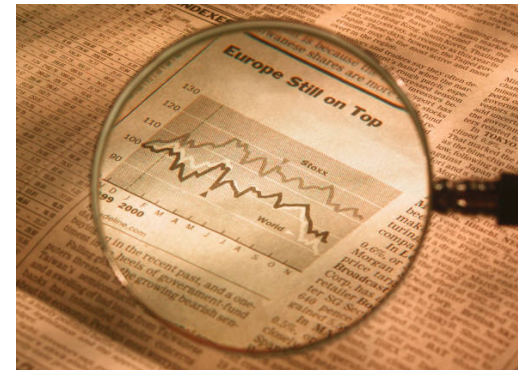


Our  
Programme

# From information to business solutions



Distilled information



Business Intelligence



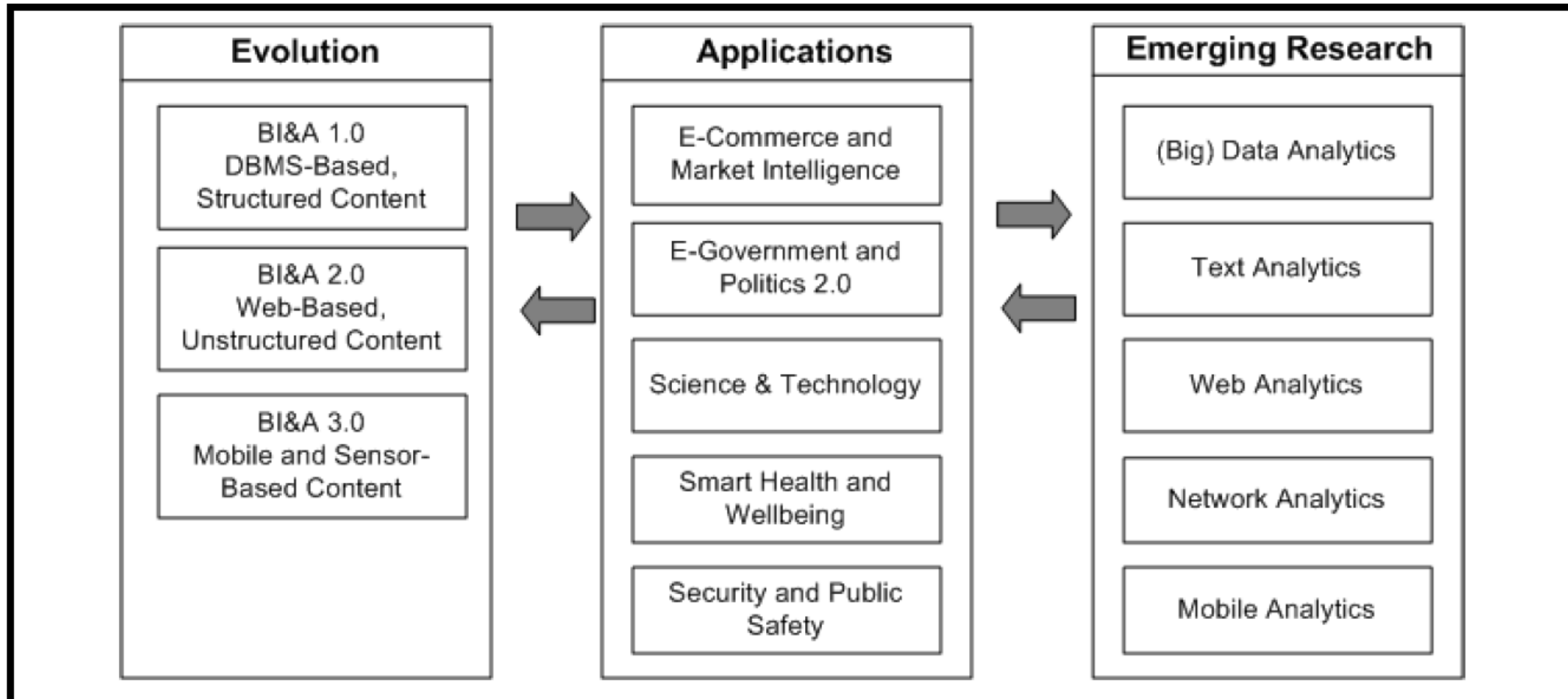
Business solution



# 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



**Figure 1. BI&A Overview: Evolution, Applications, and Emerging Research**

# Ethical issues

Display - Course Descriptions / X The Incredible Story Of How Te X +


https://www.businessinsider.com/the-incredible-story-of-how-target-exposed-a-teen-girls-pregnancy-2012-2?international=true&r=US&IR=T

BUSINESS INSIDER TECH | FINANCE | POLITICS | STRATEGY | LIFE | ALL PRIME | INTELLIGENCE

## 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

Ad closed by Google

Report this ad

Why this ad? ▶

## What is the specialisation structure? (Start: FEB)

<i>Block</i>	<i>IB/IMBI</i>	
4	IT Project Management	Business Analysis
5	Business Process Management	Business Intelligence Case Study
6	Skills Training: Writing a Master's Thesis	

# What is the specialisation structure? (Start: FEB)

<i>Block</i>	<i>IB/IMBI</i>	
1	Cases in Management Information Systems	Writing the Master's Thesis
2	Data Management	
3	Completing the Master's Thesis	

# IT Project Management

- Learn all aspects of managing IT projects
- Integral to every IT related job

<i>Block</i>	<i>IB/IMBI</i>
4	IT Project Management





# Business Analysis

- Learn modern forecasting techniques and the basics of time series analysis
- Learn how to turn a business problems into a mathematical model and how to solve the model using available software

Block	IB/IMBI	
4		Business Analysis



# Business Intelligence Case Study

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 Study



# Business Process Management

- Understand how information systems and technologies can be used to support operational and managerial business processes
- Understand best practice guidelines for BPMN (Business Process Modeling and Notation)
- Use BPMN to analyze, improve, and automate business processes in a global setting

Block	IB/IMBI	
5		Business Process Management

## 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

Block	IB/IMBI
6	Skills Training: Writing a Master's Thesis



# 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>
1	Cases in Management Information Systems



# 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>
2	Data Management



# Master's Thesis

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

Block	IB/IMBI
1	
2	
3	Completing the Master's Thesis

Writing the Master's Thesis

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

# Questions?

E-mail: [m.vluggen@maastrichtuniversity.nl](mailto:m.vluggen@maastrichtuniversity.nl)

Or visit us at the information market in Mensa

