

# DUAL Master program

## Center for Advance Studies (CAS) & Indo-German Training Centre (IGTC)

[www.cas.dhbw.de](http://www.cas.dhbw.de)



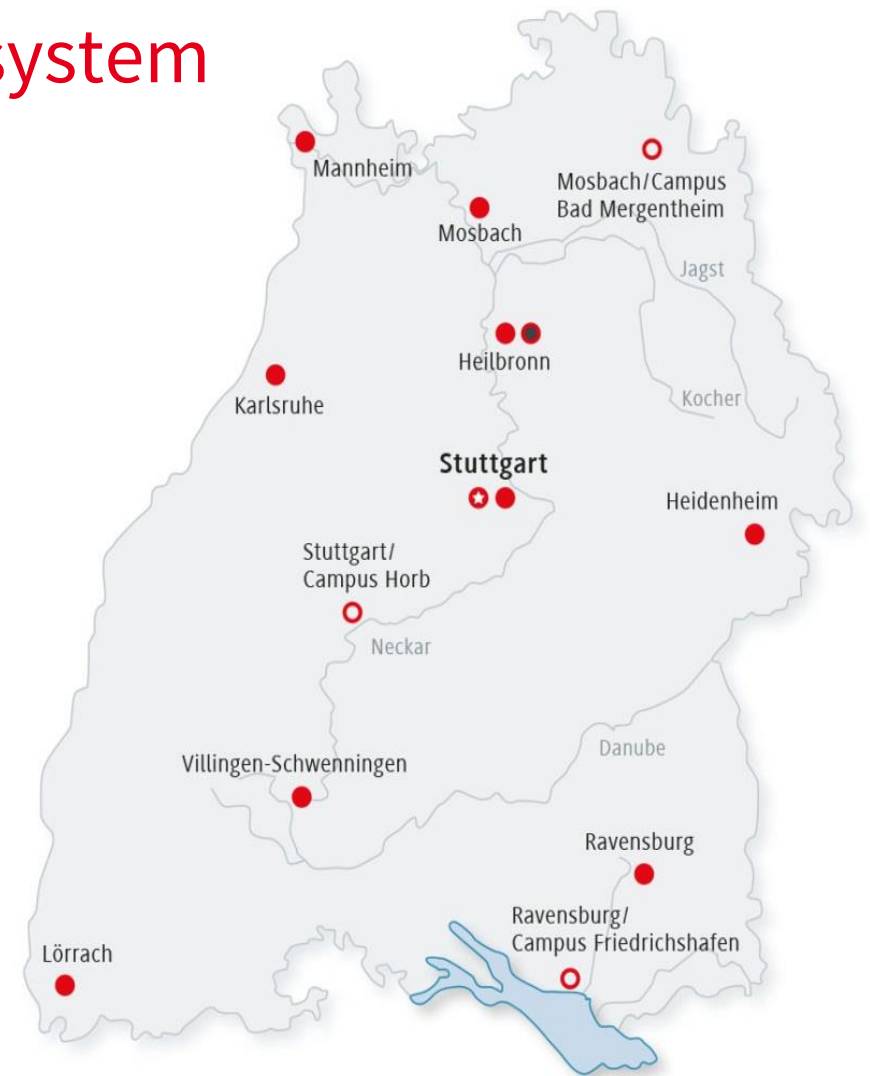
## DHBW: Based on the US state university system

DHBW is one of the largest higher education institutions in the German Federal State of Baden-Wuerttemberg:

- » 9 DHBW locations
- » 3 DHBW campuses
- » Approximately 34,000 students
- » Over 9,000 corporate partners

DHBW is the first German **higher education** institution offering degree programs with an **integrated on-the job training**

- ★ Headquarters
- Main Location
- Campus
- Center for Advanced Studies (CAS) based in Heilbronn



# Cooperative Higher Education: Academics Learning + Workplace Training

## Theoretical Background

**6 x 3 months studying at one of the  
12 DHBW locations and campuses**



## Practical Experience

**6 x 3 months practical qualification at  
one of over 9.000 cooperating  
companies and social institutions**



## Renowned Corporate Partners



# Indicators of Success

The best secondary school graduates study at DHBW

Empirical study of the University of Tuebingen

DHBW graduates are promoted to executive positions earlier than the graduates of other higher education institutions

IBM study on career opportunities

DHBW graduates enjoy higher income compared to other employees within the same age range (30-41 y.o.)

IBM study on career opportunities

Source:

Kramer, Jochen et. al. (2011): *While the best opt to study at universities, does the rest choose other higher education institutions?* [Education Magazine](#). September 2011, Volume 14, [Issue 3](#), pp 465-487  
IBM Deutschland GmbH, Corporate Communications (2000): *Berufsakademie: IBM is one of the biggest work placement providers*. Press release 17.06.2000, Böblingen.

## The Centre for Advanced Studies (CAS)

- With the establishment of the Center for Advanced Studies (CAS) in Heilbronn, Baden-Wuerttemberg Cooperative State University (DHBW) combines its postgraduate work-study programs under one roof.
- The Master program was initially concentrated on Alumni of the bachelor program at DHBW, who worked at German industrial companies such as Daimler AG or Porsche AG and simultaneously wanted to pursue a Master degree.
- Later the program was continuously extended to external and international students, so now CAS offers post-graduate Master programs in engineering, business and social work.



## The Centre for Advanced Studies (contd')

- Special mark of the CAS/IGTC program is its **practical focus**.
- Students can study for their Master's degree while working for their company. A current working contract is required for all students.
- Students are also required to have at least one year of working experience. German students in general have even more.
- CAS professors besides having a theoretical background and PhDs are also required to have long-term practical experience in business corporations.
- Thereby CAS can make sure, that
  - state-of-art business and technical knowledge is taught in all courses
  - all students can immediately apply the theoretical work from CAS directly to their practical work





# Intention and Background of the CAS-IGTC MBA Program

- The CAS-IGTC MBA program is intended at IGTC students, who wish to **pursue an international experience, a higher education in business and simultaneously earn a MBA at a renowned German institution.**
- The MBA program qualifies students to take over leadership positions in internationally oriented companies.
- During the CAS experience, IGTC students stay for approx. 4 weeks in Germany. During their stay students are required to complete 3 courses of the CAS MBA program. Several courses required for the German MBA program – can be recognized from IGTC.





# Structure of the CAS-IGTC MBA Program

## Timeline - Overview

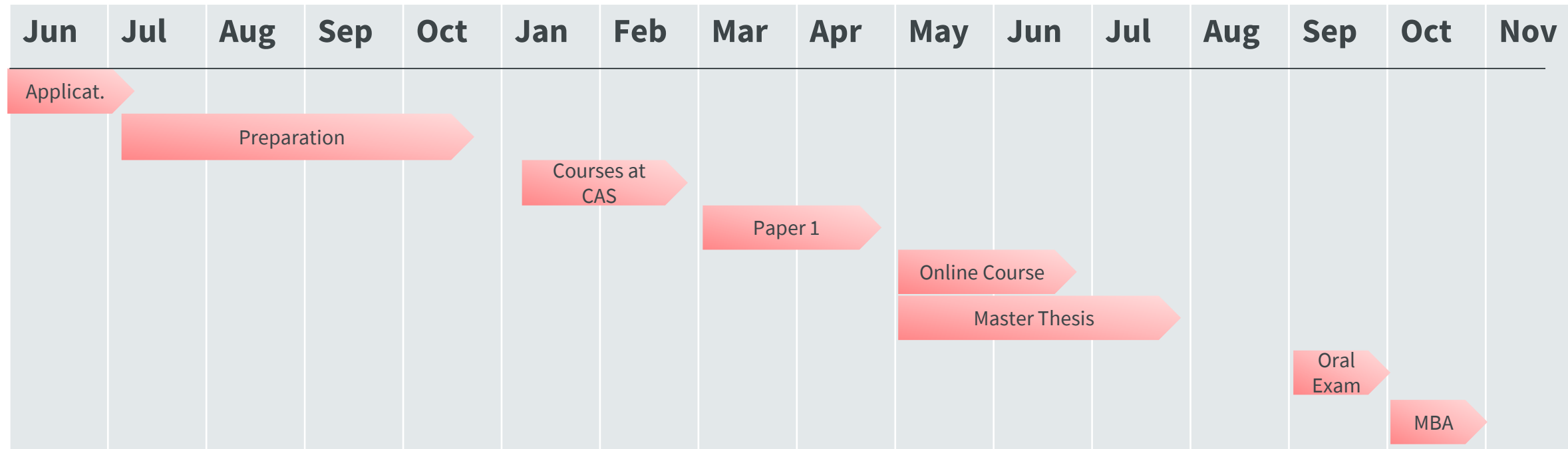


- IGTC students enroll at IGTC, complete courses and work for employers
- Complete and receive **IGTC Certificate**



- IGTC students also enroll at CAS (Germany), get IGTC courses recognized, take courses at CAS and complete their Master thesis
- Complete and receive **German MBA Degree**

## Timeline – 2 Year Study program at CAS (Germany)



- The timeline of the program is scheduled to offer IGTC students a curriculum packed with high-quality courses, opportunities to experience German working and and state-of-the-art knowledge about German production and digitization techniques.
- The program can be completed with a renowned **German MBA degree** within **12 months**.

# Application Requirements

- Successfully completed and qualified university course of studies (Bachelor) at a recognized German or international university
- English language skills sufficient to enable studies proved either by TOEFL (at least 500 points in the PBT) or a comparable test or an English language Bachelor's degree
- The approval of at least one year of relevant professional work experience following the acquisition of the first university degree (Bachelor)
- A successful acceptance examination in the form of a selection interview
- An agreement with a cooperation institution, which provides employment for the period of the Master's program at CAS



# Timeline – Important Dates and Deadlines

- June 30th – Application Deadline for the program
- January 31st – Start of course week 1 (Courses, Excursions and Company Visits)
- February 7th – Start of course week 2 (Courses, Excursions and Company Visits)
- February 14th – Start of course week 3 (Courses, Excursions and Company Visits)
- February 21st – Start of final week (Meetings with Scientific Paper supervisors)
- February 28th – Start of preparation of Research Paper 1 (2 months time)
- May 1st – Online Course module
- May 1st – Start of preparation of Master Thesis (3-4 months time)
- September – Oral examination
- September 30th – Award of MBA Degree



# Structure of the Program

| MBA Modules  |            |
|--|------------|
|  | Credits    |
| Quantitative Methods and Market Research                         | 5          |
| Fundamentals of Management                                       | 5          |
| Cost Accounting, Strategic Cost Management                       | 5          |
| Sales & Distribution Management, Services and Retail Marketing   | 5          |
| Human Resource Management, Ind. Relations and Labour Laws        | 5          |
| Economics for managers, International Trade                      | 5          |
| Business Law   | 5          |
| Business Ethics and Corporate Gov. and Organizational Behavior   | 5          |
| Financial Management I and II, Financial Accounting              | 5          |
| Research paper   | 5          |
| Master thesis  | 20         |
| Strategic Management and digitalisation                          | 5          |
| Elective Module 1: Business Analytics                            | 5          |
| Interdisciplinary competencies                                   | 5          |
| Elective Module 2: Industry 4.0 - Process and quality management | 5          |
|  |            |
| Modules can be recognized from IGTC                              | 45 Credits |
| Modules can be done at IGTC under CAS supervision                | 30 Credits |
| Modules to be completed at CAS (Germany)                         | 15 Credits |

- The Dual MBA program at CAS requires the completion of 90 ECTS Credits
- For IGTC students...
  - 45 ECTS credits are recognized from their courses taken at IGTC
  - 30 ECTS credits to be completed in India under CAS supervision
  - 15 ECTS credits to be completed while being at CAS in Germany

# Courses for IGTC students



## Course Overview

- The three courses taken at CAS are designed to give students a deep insight into German engineering culture as well as current state-of-the-art analytics knowledge used both in engineering and business. All courses are taught in English.

### Elective Module 1: Industry 4.0

#### Content

- German production processes and quality management system
- Usage of artificial intelligence in production
- Business process reengineering in the digitization

### Interdisciplinary competencies

#### Content

- Effective communication
- Team Leading
- Personal development skills
- Intercultural behaviour

### Elective Module 2: Business Analytics

#### Content

- Usage of Big Data from production in business using Analytics techniques
- Descriptive Analytics, Predictive Analytics Prescriptive Analytics
- Production Analytics and Marketing Analytics
- Analysis of Software Tools

# Course: “Industry 4.0 – Process and Quality Management”

- **Industry 4.0** is a name given to the current trend of automation and data exchange in manufacturing technologies. It includes cyber-physical systems, the Internet of things, cloud computing and cognitive computing. Industry 4.0 is commonly referred to as the fourth industrial revolution. This course tackles current topics in the steering of production facilities and ensuring the quality of process and products within Industry 4.0.
- **Topics of the course include:**
  - Introduction to Artificial Intelligence (AI)
  - Introduction to European Quality Management Standards
  - IT Process Management & Work Flow Management
  - Effective Process Management
  - Business Process Reengineering

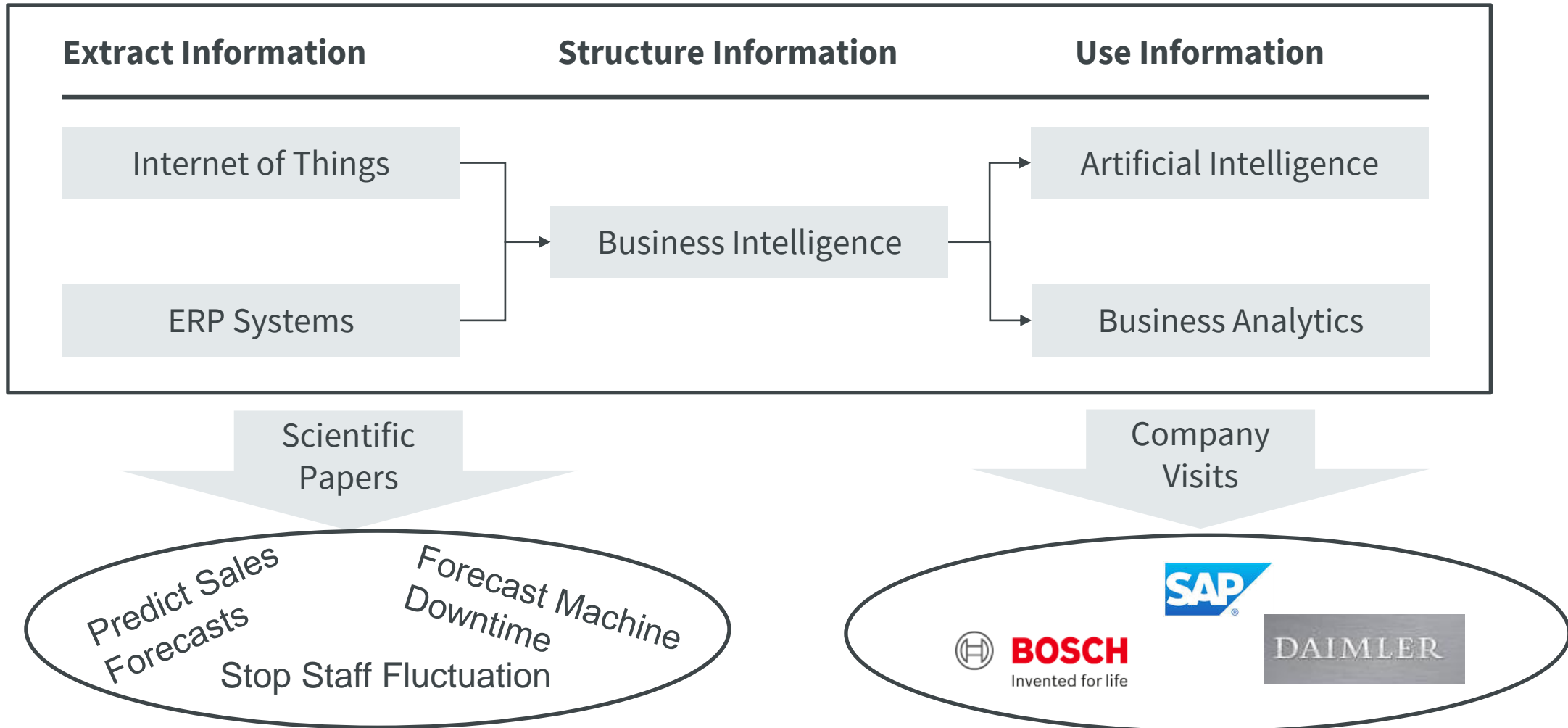
## Course: “Interdisciplinary Competencies”

- The seminars in “Interdisciplinary Skills” assists students in their personal development and career planning. Students will get to know themselves better and can expand their strengths in the seminars.
- Seminars offer you a variety of ideas to help master career challenges and develop personal skills. Our seminar catalogue offers a wide range of seminars on topics such as
  - Effective Communication and Shaping of Relationships
  - Team Leading and Controlling of change
  - Personal Development and Evolvment of your personality
  - Intercultural Behavior

## Course: “Business Analytics”

- **Business analytics (BA)** refers to the skills and technologies needed for continuous iterative exploration and investigation of past business performance. In the context of the "digitization of the economy" (for example through Industry 4.0 and the "Internet of Things"), extraordinary large amounts of internal data are generated. Companies that want to be successful in the future have to be able to analyze these data and draw conclusions from it. At this point, the course **Business Analytics** starts.
  
- **Topics of the course are:**
  - Devising and usage of descriptive, predictive and prescriptive algorithms
  - Usage of state-of-the-art statistical methods to forecast numbers and events
  - Application of business analytics software to aggregate, analyse and visualize business problems and solutions for top management

# Course Road Map



## Course Idea



**Extract Information**

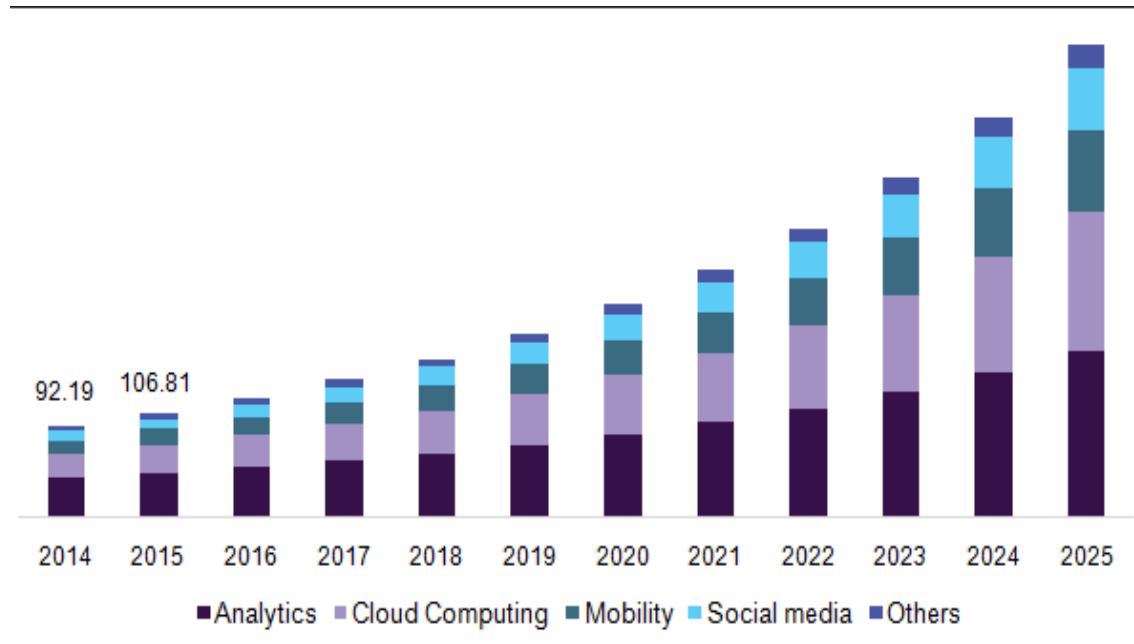


**Use and present Information**

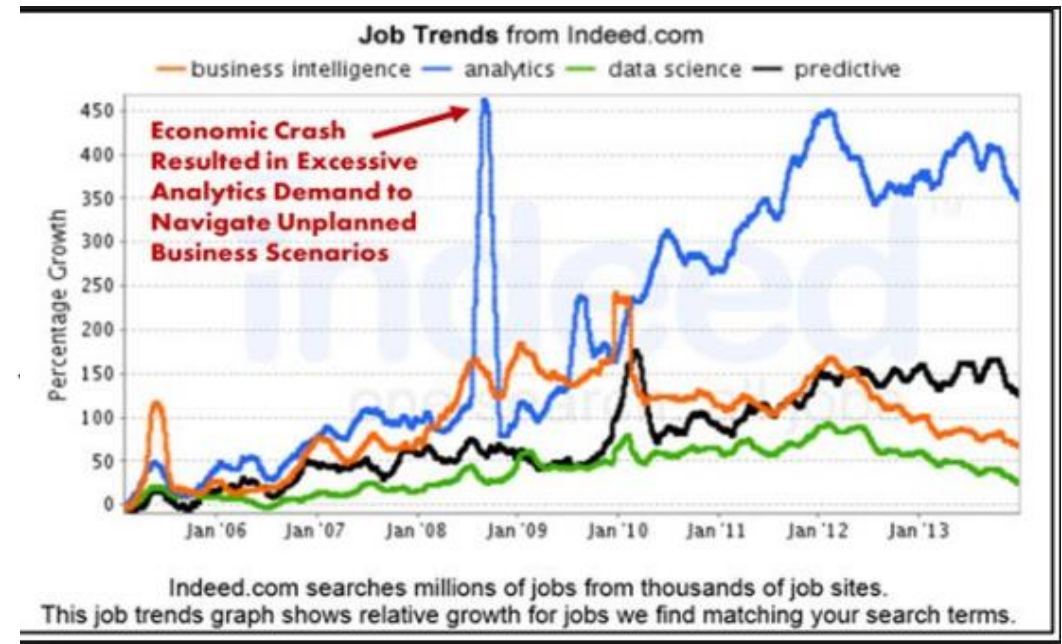
SAP Digital Boardroom

# Meaning of Digitalization

## Digital Transformation Market Size



## Digital Transformation and Job Trends





# Scientific Papers

- **Research Papers** are designed to combine problems from the operational practice with theoretical theories and sophisticated methodologies. Methodologies are quantitative statistical methods, learned in the Business Analytics module.
- The research project work has a scope of 15-20 pages (without table of contents and appendix). It will be created in a processing time of two months.
- Each Research Paper is a separate module and consists of two partial examinations, with following weightages: Research Paper writing 70%, presentation 30%.
- Topics for research paper can be chosen freely. Proposals are made by CAS supervisors.
  
- **Typical topics are and could be e.g.:**
  - Cash Flow Forecasting for a German conglomerate using time-series models
  - Optimization of Working Capital Levels using a multivariate regression approach
  - Feasability Study for a new product in a foreign market using systematic customer survey data

## Master's Thesis

- **The master's thesis** can be started as soon as the research projects 1 and 2 have been successfully completed. It has a volume of 60-80 pages (without table of contents and attachment). It is created in a processing time of 3-4 months. The final grade is based on following weightages: Master's Thesis 85%, Colloquium (Defense) 15%.
- The master's thesis should tackle a big business problem with more sophisticated models and can also involve the collection of data.
- **Typical topics are and could be e.g.:**
  - Comparison of German and Indian customer preferences using extensive questionnaire and interview data
  - Development of a scoring system for selection and rejection of new customers
  - Predictive maintenance systems in German industrial companies – current state and future developments

## Company Visits

- Company visits are intended to give students an impression of German working culture, production methodologies and inside views of state-of-the art technology.
- Students will meet production and sales managers and can ask questions regarding current and future development of the industry.
- Past company visits include companies like
  - Daimler AG
  - Robert Bosch GmbH
  - Porsche AG



# The MBA Degree

## Master Degree and Certificate

- Students receive an MBA degree certificate awarded by the DHBW, which is currently being updated on the new content

# The CAS campus in Heilbronn, Germany



# Modern Environment for Modern Study Programmes...





## ...at the Bildungscampus Heilbronn



# Housing and Visa

# Housing

- IGTC students are accommodated in modern youth hostel, which provide a convenient and pleasant stay in Germany
- Students can chose between double or single bedrooms
- The town of Heilbronn offers also a variety of leisure activities and also traditional German restaurants and sightseeing options





# Housing

- The youth hostel is 200 meters from campus



# Housing



## Visa and Insurance

- IGTC students can apply for a student VISA or a tourist VISA
- As the actual stay within Germany is just about 4 weeks a tourist VISA is enough and also much easier to obtain. We therefore recommend to apply for a normal tourist visa
- Students from countries outside the EU must obtain health insurance in Germany. The costs usually amount to approximately 80 euros per month.

# Costs of the Master Program



## Costs

- IGTC students are officially enrolled as CAS students for two semesters until completion of the Master's thesis.
- Fees for one semester are 4,050€, total 8,100€  
amount for taking courses and mentoring of the scientific papers. Enrollment fees are 300€.
- Costs for accommodation for approx. 4 weeks arise at around 1,400€.
- Costs for food and leisure activity can vary by person and have to be evaluated individually.
- Costs for flights usually amount to ca. 800€-1.000€ for round-trip flights.
- Costs for VISA and health insurance must be added.



# References from current and former students

# SOUND PRACTICAL TRAINING

- Degree course with on-the-job training
- Business-related issues are incorporated in class
- Newly gained specialist knowledge and methodological skills are directly applied in professional practice



*Hayo Schelten: “I dedicated my master’s thesis to an upcoming project in my company. It served as a springboard to my management position.”*

**Hayo Schelten**

Master’s Graduate DHBW CAS  
Head of European Locomotive Fleet  
Strategy and Planning, Deutsche Bahn AG

## TAILORED SELECTION

- Wide range of study programmes, highly customisable study concept
- Wide variety of modules to choose from, allowing for unique opportunities of job integration
- Tailored to previous specialist knowledge, business tasks and personnel development



*Tabea Fey: “Given the wide variety of possible modules to choose from in my Cooperative Master’s programme, there are no limits to the topics and ideas that my employer and I have and share.”*

**Tabea Fey**

Master’s Student DHBW CAS  
Head of Department Dental Private Label,  
Kettenbach GmbH & Co. KG

## HIGH QUALITY STANDARD

- Close integration of theory and practice
- Highly topical course content
- Well-versed teaching staff
- Experienced organisation
- Focus on the students
- Motivated students



Photo credit: [Steph Gossival/ZDF](#)

*Sandra Schuler: “The Cooperative Master’s is an asset to us, which particularly distinguishes itself by its strong focus on practical application and the quality of the teaching staff.”*

### **Sandra Schuler**

Vocational Training, Further Training,  
Personnel Development  
Zweites Deutsches Fernsehen (Corporate Partner)

## FLEXIBLE IN TIME

- Flexible scheduling of classes allows students to reconcile study, work and family life
- Long-term planning of attendance times for classroom teaching blocks
- Standard period of study can be extended



*Sebastian Schmid: “It was no problem at all to take all the exams that took place during my parental leave afterwards.”*

**Sebastian Schmid**  
Master's Graduate DHBW CAS  
Strategic Purchaser, Sto SE & Co. KGaA

# INTERDISCIPLINARY APPROACH

- Sharing professional knowledge and experience with fellow students from various industries and positions
- More than 1,000 postgraduate students



*Miriam Knopf: “The conversations and discussions on specialist topics with my fellow students were particularly helpful for me. They came from different departments and positions.”*

**Miriam Knopf**

Master's Graduate DHBW CAS  
Head of Vocational Education and Training  
Coordinator of Further Professional Development  
Werkstätten Esslingen Kirchheim gGmbH



# PROMOTING PERSONAL STRENGTHS

- “Interdisciplinary Skills” module to strengthen personal characteristics in a targeted manner
- Wide variety of seminars to choose from (around 50 classes)
- Development of intercultural skills through international excursions



*Markus Schwarzer: “The ‘Interdisciplinary Skills’ module was incredibly helpful for me, also for my future.”*

**Markus Schwarzer**

Master’s Graduate DHBW CAS  
Design Engineer, Allgaier Process Technology GmbH

# INDIVIDUAL EXCHANGE

- Small groups with an average of 18 students per module unit
- Intensive exchange with teaching staff and fellow students



**Joshua Reiling**  
Master's Graduate DHBW CAS  
Design Engineer, Daimler AG

*Joshua Reiling: “In my eyes, the practical experience of the teaching staff and my fellow students, which prompted many interesting discussions, have been particularly useful.”*

# LOCAL COMPETENCIES

- Classes across all DHBW locations
- The best learning environment for each study programme



**Prof. Dr. Gabi Jeck-Schlottmann**  
President DHBW Mosbach

*Prof. Dr. Gabi Jeck-Schlottmann: “Offering the Cooperative Master’s degree courses across all our locations provides the opportunity to combine both our resources and especially our strengths. The students get the best of all our locations, while they can choose from a highly flexible range of studies.”*