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# Prof. Dr. Matthias D. Mahlendorf

## Data Analytics in der Controllinglehre

Impulsvortrag, Wissenschaftliche Kommission Rechnungswesen, 28. Februar 2019



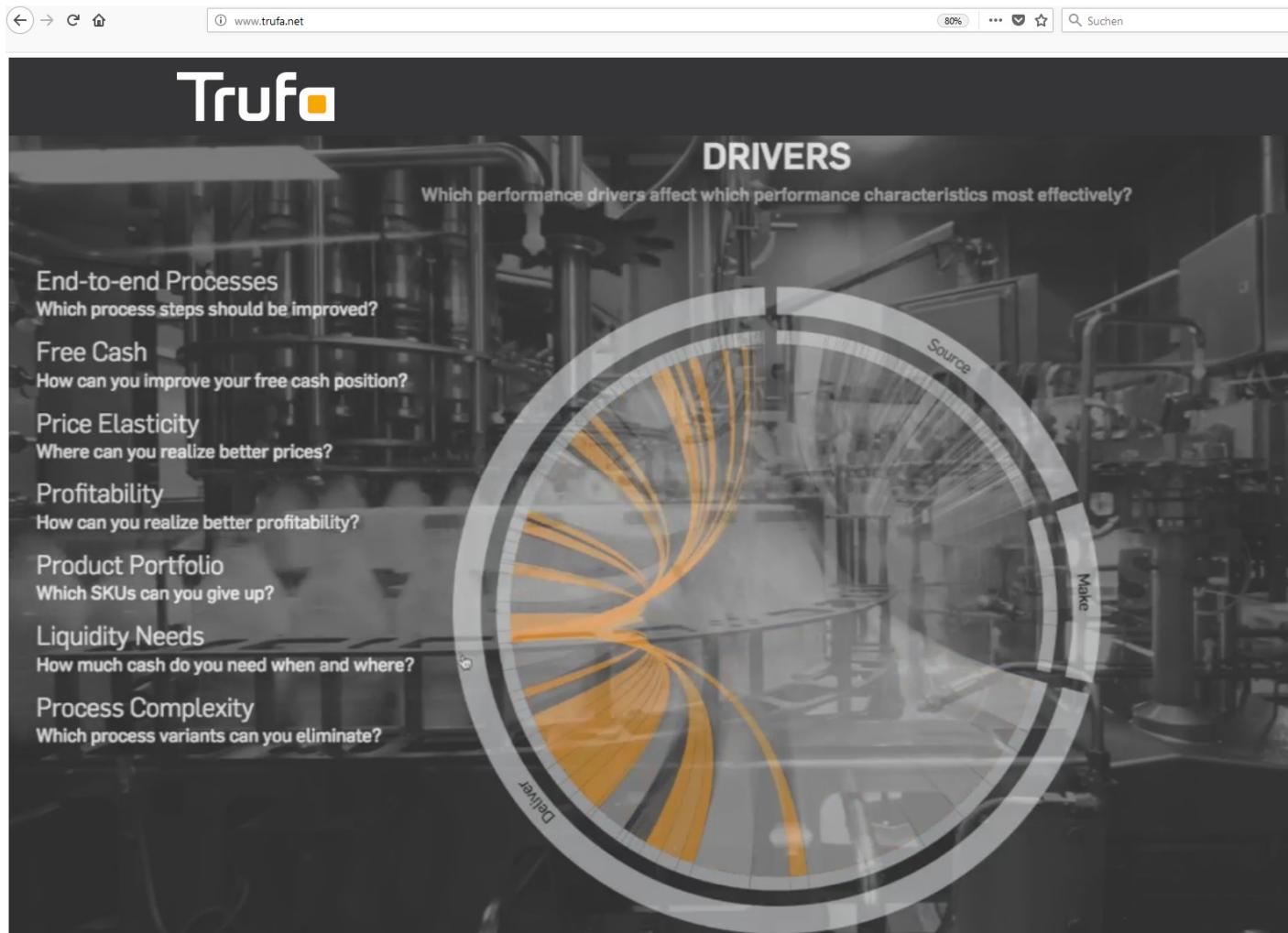
# TEIL 1

## DATA ANALYTICS TOOLS

# DATA ANALYTICS TOOLS - ÜBERBLICK

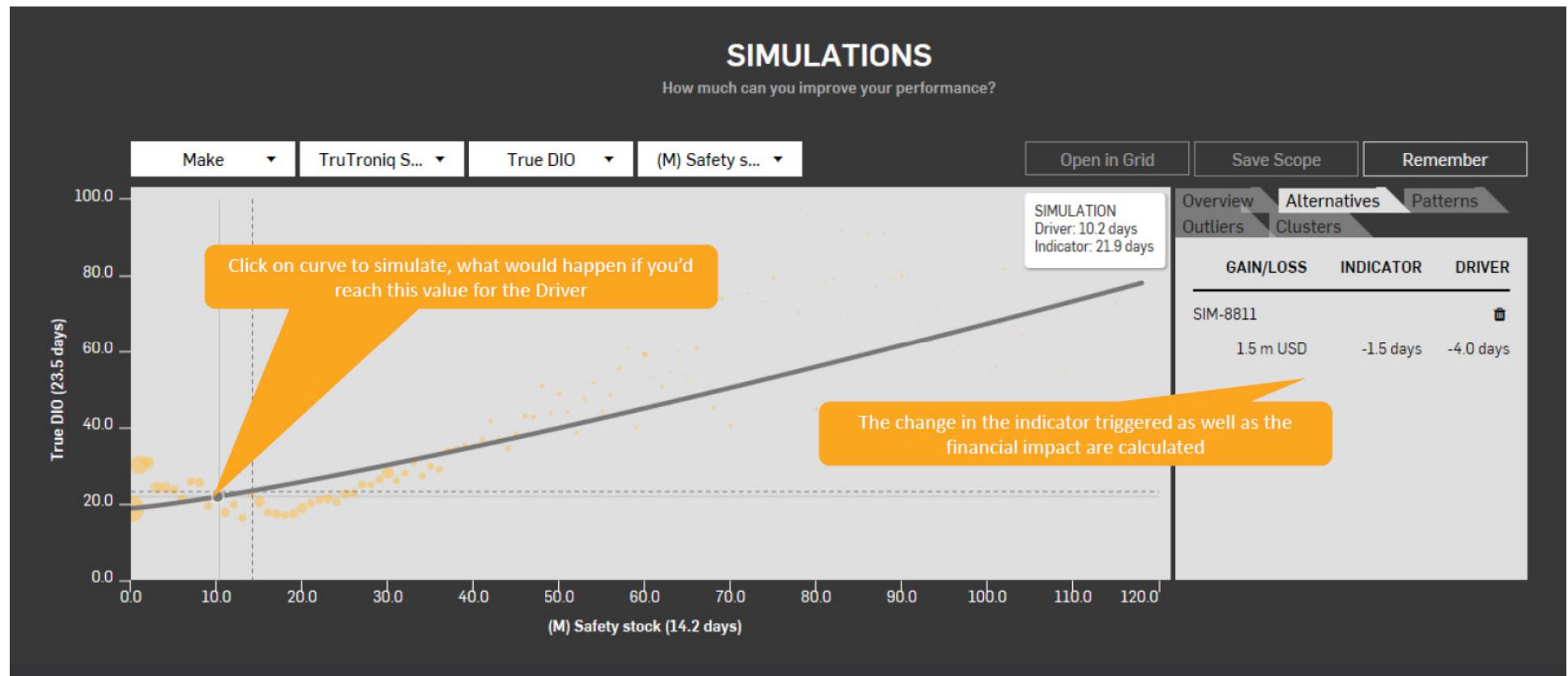
Klassisches Thema	Data Analytics Beitrag	Datenquelle	Analytics Konzepte	Software
Working Capital Management u. a.	Identifikation von kritischen Faktoren	Trufa Demo System	Big Data, Robust Estimations	TRUFA (Deloitte)
Balanced Scorecard & Strategy Maps	Analyse von Performance Treibern	Strategy Simulation (Harvard Case "Delta/Signal")	Lagged Effects Regression, Mediation	Stata
Visualisierung	Komfortable & schnelle Visualisierung von big data	Gamification Case (Ernst & Young)	Survey Research, Experiment, Causal Inference	Tableau
Kostenfunktionen, Planung	Schätzung von Kostenfunktionen, Prediction models	Timp Health Case (Ernst & Young)	Stata, Machine Learning, Interactions	Stata, Python
Budgetierung, Dysfunktionale Effekte von Incentives	Identifikation von Target Ratcheting und Earnings Management	Unternehmenssimulation (Strohhecker / Mahlendorf)	Panel Regressions	Stata
Discounted Cash Flows	Investitionsentscheidungen unter Unsicherheit	Shade Tree Roasters Case (Wouters et al. 2012)	Monte Carlo Simulation	Excel + Crystal Ball

## TRUFA – WERTTREIBER IN BIG DATA ERKENNEN

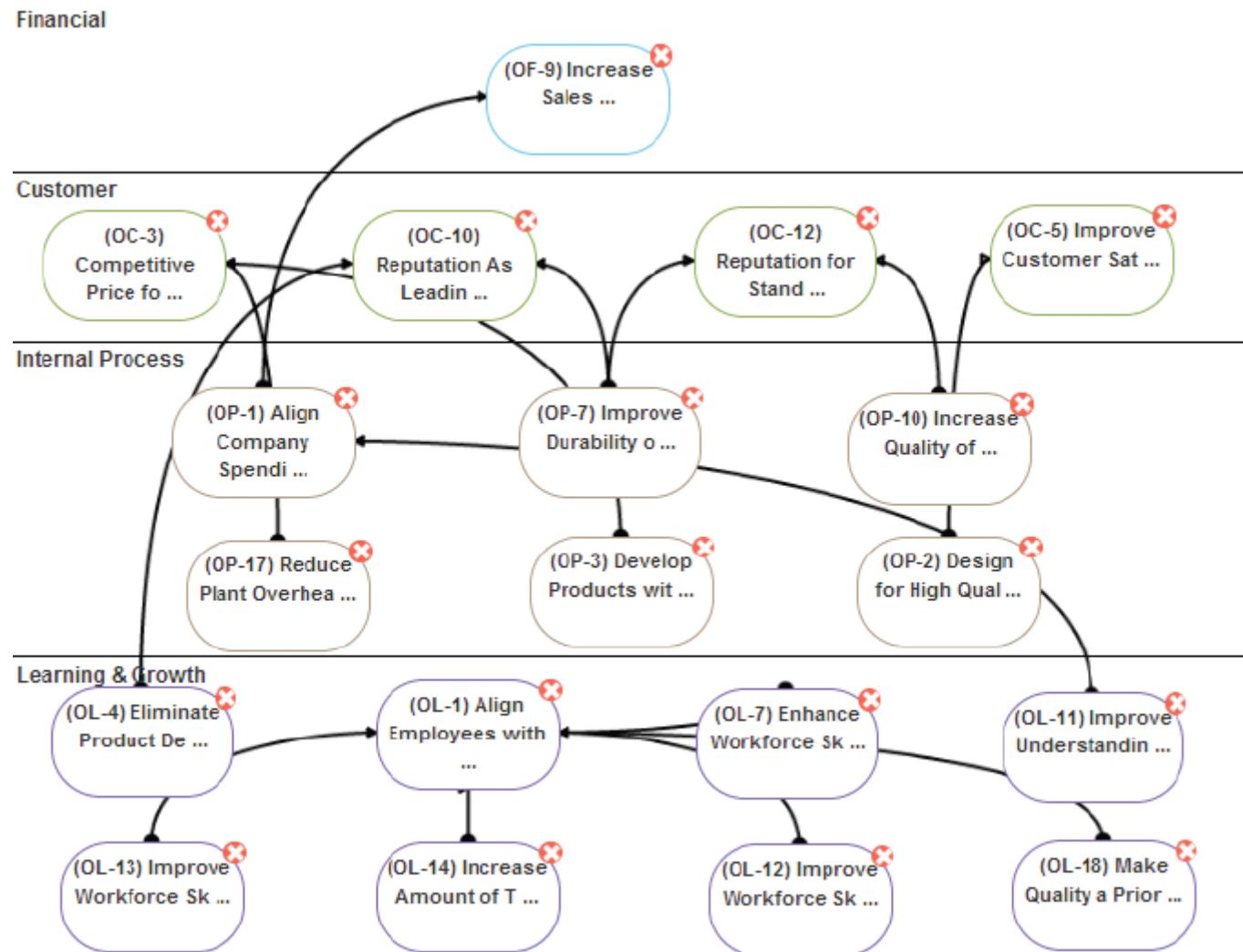


# DATA ANALYTICS TOOLS

## TRUFA – WERTTREIBER IN BIG DATA ERKENNEN

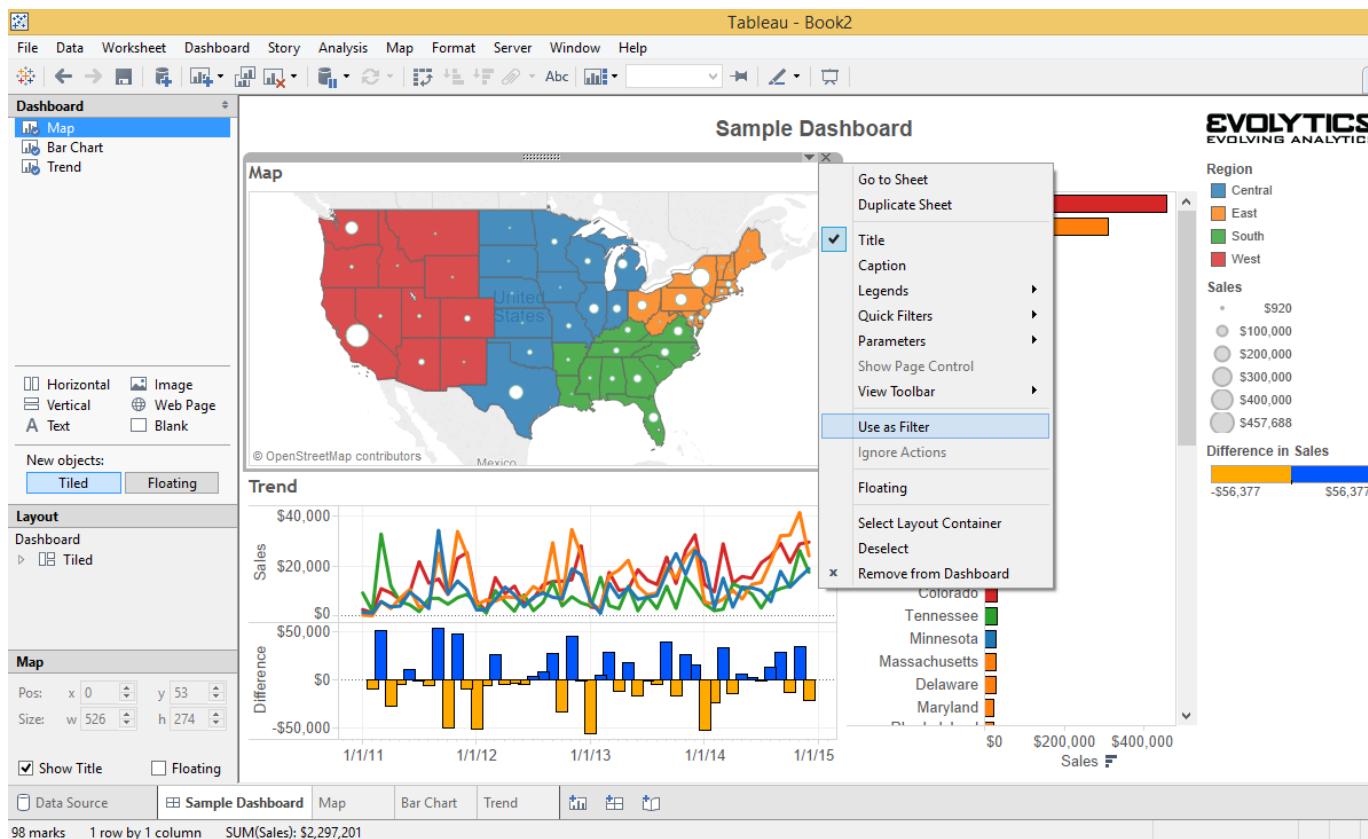


## STRATEGY MAP – STATISTISCHES TESTEN DER ZUSAMMENHÄNGE



# DATA ANALYTICS TOOLS

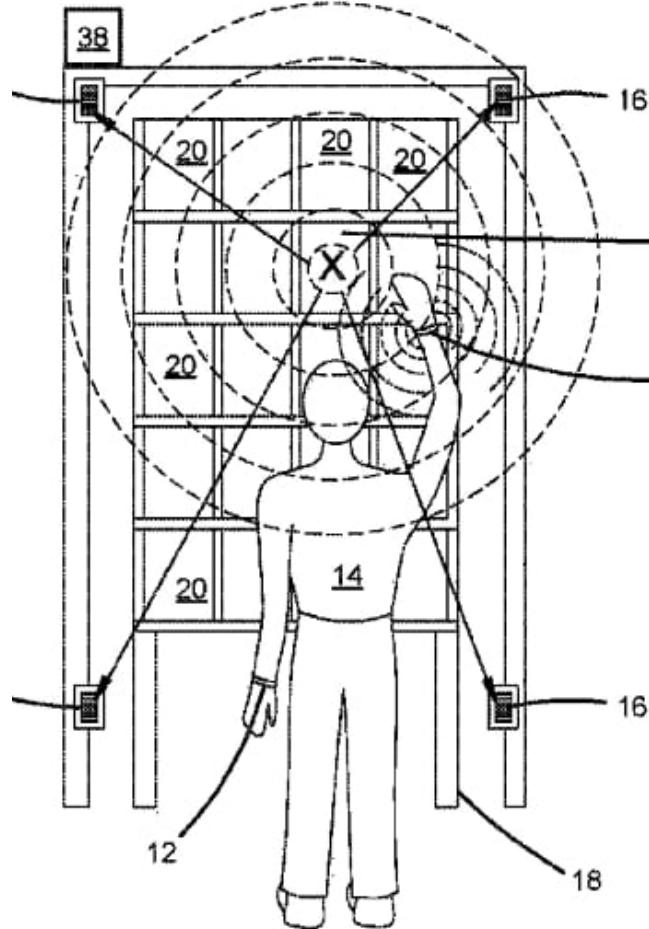
## TABLEAU – VISUALISIERUNG



**TEIL 2**

**STUDENTEN FÜR ETHISCHE ASPEKTE &**  
**DIE VERÄNDERUNGEN IN DER**  
**ARBEITSWELT SENSIBILISIEREN**

## AMAZON WRISTBAND – EFFIZIENZSTEIGERUNG VS. ÜBERWACHUNG



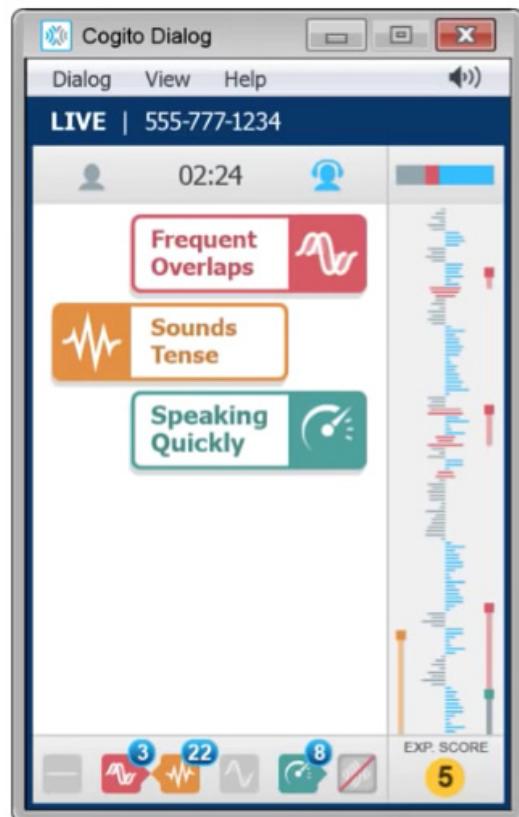
**Amazon patentiert ein Armband, das die Bewegungen von Logistikmitarbeitern trackt.**

Das Armband kann vibrieren um die Hand in die richtige Richtung zu führen.

## COGITO – AUTOMATISIERTE BEURTEILUNG IM CALL-CENTER

### Real-time Guidance for Agents

cogito



Effortless hands free speaking alerts

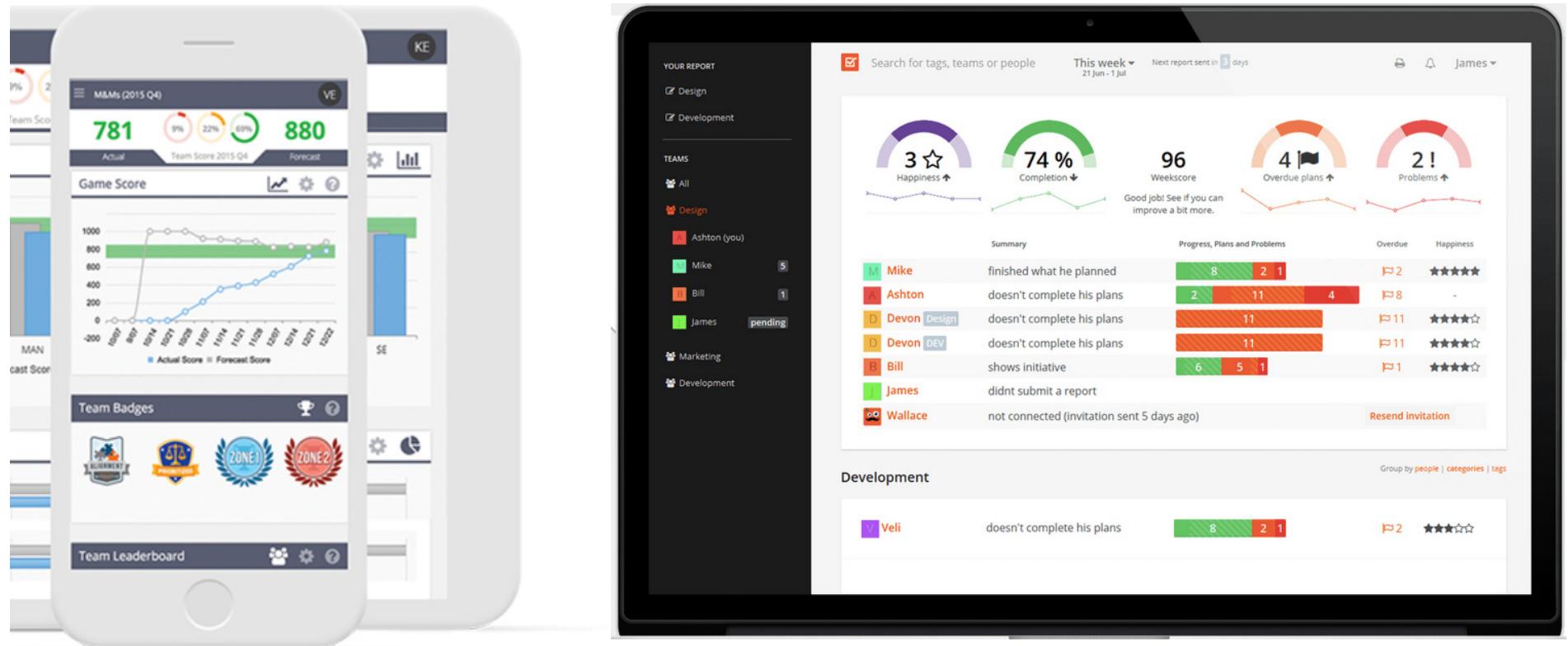
Actionable insight into  
customer' perception

Seamless integration with  
existing workflow & systems

# DATA ANALYTICS IMPLIKATIONEN

## OBJECTIVES AND KEY RESULTS (OKR) – TRANSPARENTE ZIELE

- “MyObjectives”
- “Weekdone”



# TEIL 3

## THESEN

# THESEN ZU DATA ANALYTICS IN DER CONTROLLINGLEHRE

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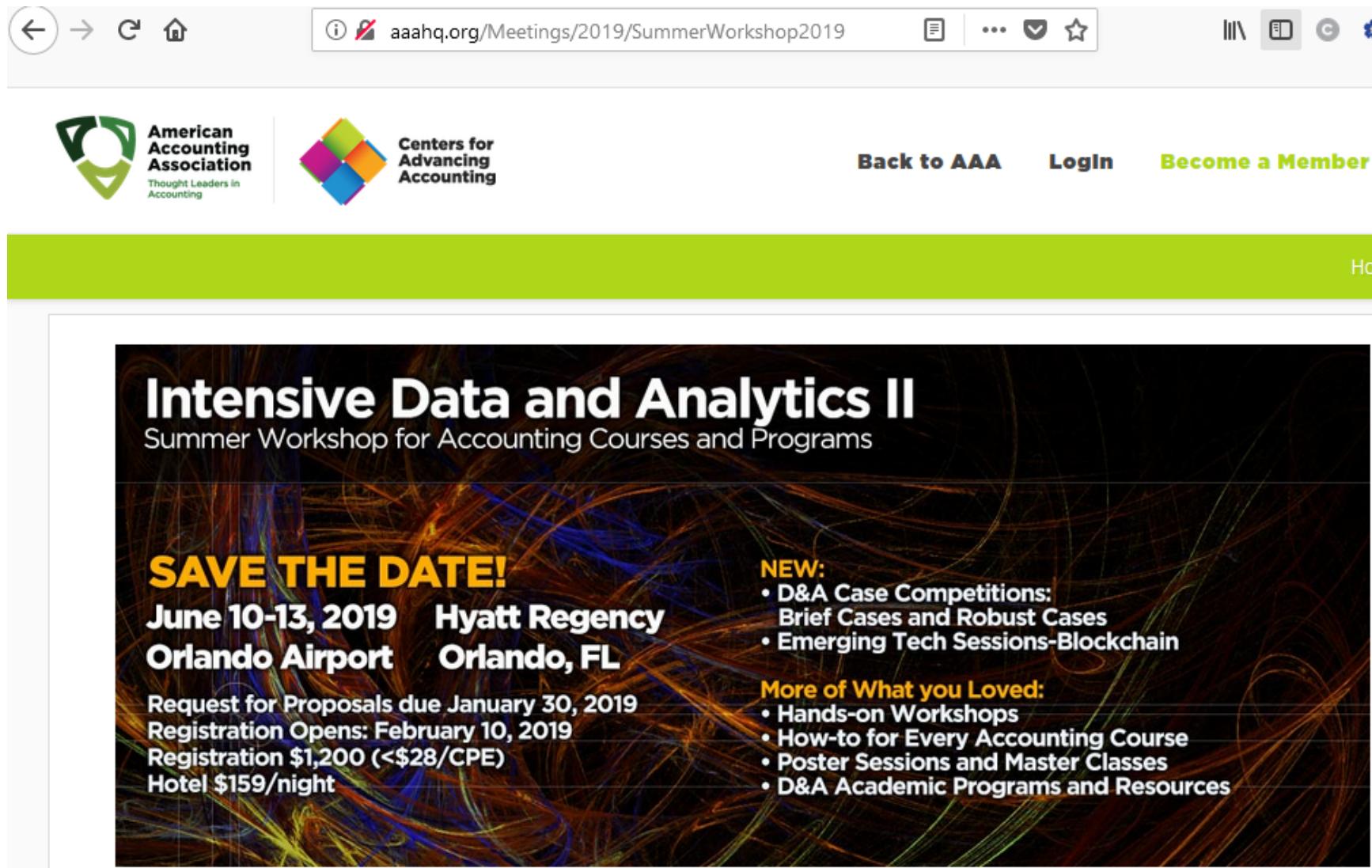
## KATZEN ERKENNEN ≠ BESTES INVESTITIONSPROJEKT AUSWÄHLEN, ABER...

1. Wenn Controlling relevant bleiben soll und die Höhe über die betriebswirtschaftliche Interpretation der Zahlen behalten will, müssen wir unsere Studenten mit aktuellen Trends im Bereich Data Analytics (z. B. Machine Learning) vertraut machen!
2. Der Praxis-Trend in Richtung Data Analytics bietet die Chance, dass Controllingforschung und Controllinglehre stärker zusammenwachsen!
3. Wenn wir die Zukunft mitgestalten wollen, müssen wir aktiv überlegen, welche Controllingfragestellungen sich in „prediction & classification“ Fragen übersetzen lassen und wo die „Trainingsdaten“ herkommen können!

# **ANHANG**

## **DATA ANALYTICS – WEITERFÜHRENDE RESSOURCEN**

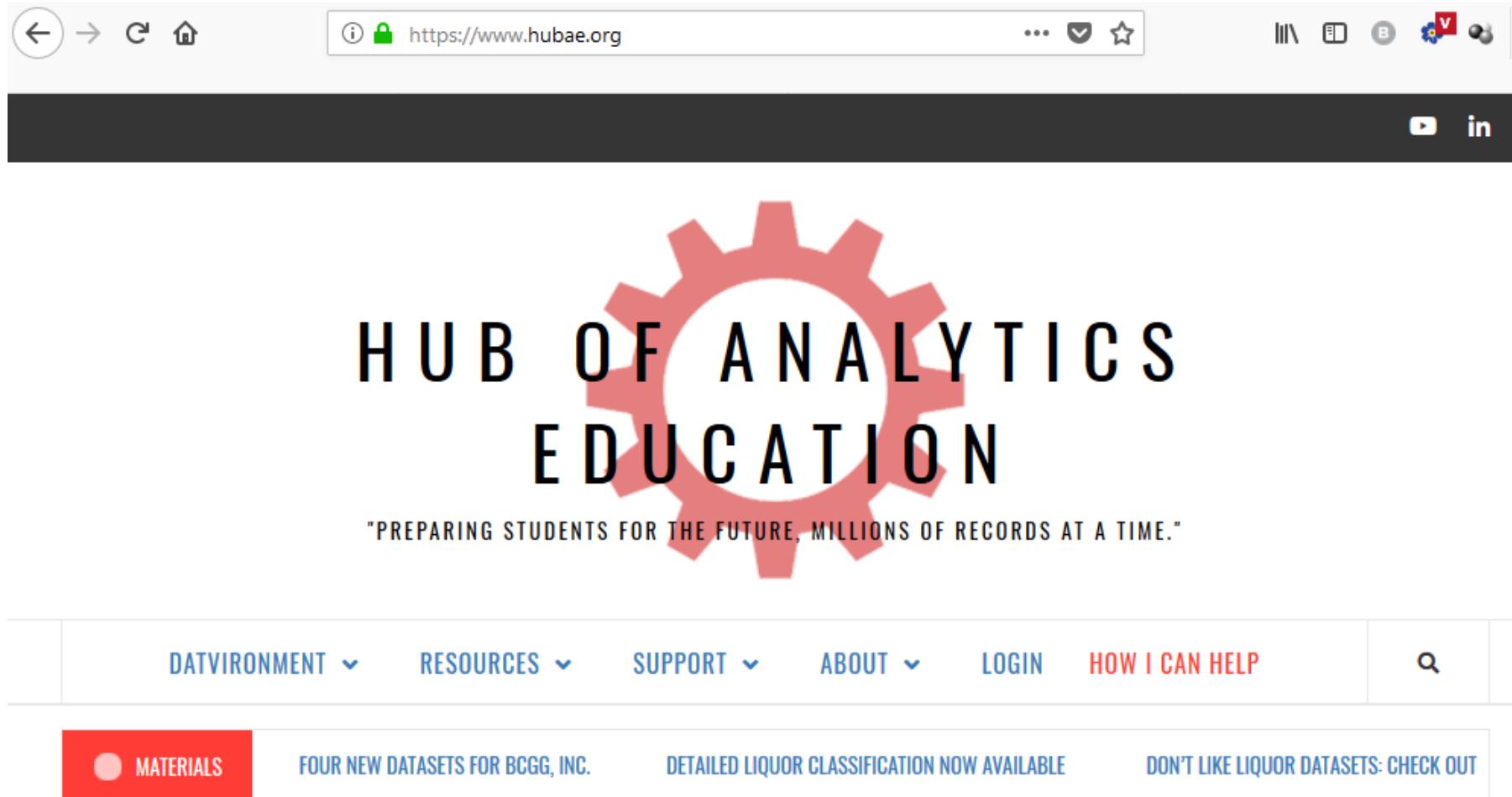
# WEITERFÜHRENDE RESSOURCEN



The screenshot shows a web browser interface with the following elements:

- Address Bar:** aaahq.org/Meetings/2019/SummerWorkshop2019
- Header:** American Accounting Association (with logo) and Centers for Advancing Accounting (with logo).
- Header Buttons:** Back to AAA, Login, Become a Member.
- Content Area:**
  - Title:** Intensive Data and Analytics II
  - Subtext:** Summer Workshop for Accounting Courses and Programs
  - Call-to-Action:** SAVE THE DATE!
  - Date and Location:** June 10-13, 2019 Hyatt Regency Orlando Airport Orlando, FL
  - Registration Information:** Request for Proposals due January 30, 2019, Registration Opens: February 10, 2019, Registration \$1,200 (<\$28/CPE), Hotel \$159/night
  - New Features:**
    - D&A Case Competitions: Brief Cases and Robust Cases
    - Emerging Tech Sessions-Blockchain
  - More of What you Loved:**
    - Hands-on Workshops
    - How-to for Every Accounting Course
    - Poster Sessions and Master Classes
    - D&A Academic Programs and Resources

# WEITERFÜHRENDE RESSOURCEN



The screenshot shows a web browser window with the URL <https://www.hubae.org>. The page features a large red gear icon containing the text "HUB OF ANALYTICS EDUCATION". Below the gear, a quote reads: "PREPARING STUDENTS FOR THE FUTURE, MILLIONS OF RECORDS AT A TIME." The navigation bar includes links for DATVIROIMENT, RESOURCES, SUPPORT, ABOUT, LOGIN, and HOW I CAN HELP, along with a search icon. A red banner at the bottom left says "MATERIALS". Other banners mention "FOUR NEW DATASETS FOR BCGG, INC.", "DETAILED LIQUOR CLASSIFICATION NOW AVAILABLE", and "DON'T LIKE LIQUOR DATASETS: CHECK OUT".



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- ▶ Current topics include:
  - Analytics mindset
  - Revenue recognition (ASC 606)
  - Leases (ASC 842)
  - Financial instruments: classification and measurement (ASU 2016-01)
  - Professional judgment
  - Fair value
  - Sustainability reporting
  - Auditing
  - IFRS

### Analytics mindset

Analytics is transforming the way business is done.

#### *How?*

By providing powerful new insights to inform business decisions.

#### *What's different?*

While organizations have always analyzed data to help support business decisions. The difference today is the volume, velocity, variety and veracity of data being analyzed, as well as the computing power of new, advanced analytics technologies.

But what's also different is the importance of the human element of analytics. Analytics is changing the role of the business professional by placing analytics at the heart of all business decisions. As a result, professionals today need an analytics mindset.

# WEITERFÜHRENDE RESSOURCEN

## SAP BUSINESS OBJECTS CLOUD

