



## PANEL #4

VALENCIA  
April 2025

# Theme

Technology Innovation and Business  
Management

DataSys 2025 & ComputationWorld  
2025



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April 2025

### Moderator

**Dr. Steve Chan, VTIRL, VT/DE-STEAM - Orlando, USA**

### Panelists

**Dr. Viktoriia Apalkova, School of Management Fribourg (HES-SO),  
Switzerland**

**Prof. Dr. Joseph G Vella, University of Malta, Malta**

**Prof. Dr. Jesper Skjødt, Zealand erhvervsakademi, Danmark & & Lektor  
Sabina Rolsted, Zealand, Denmark**

**Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE, Germany**

**Prof. Dr. Lasse Berntzen, University of South-Eastern Norway, Norway**



# Chair Introduction

VALENCIA  
April 2025

## Panelists

**Dr. Viktoriia Apalkova -> How Does AI Influence the Acceptance of Business Intelligence Solutions in Switzerland?**

**Prof. Dr. Joseph G Vella -> Bridge the gap between ICT and Data Owners (e.g., Generative AI)**

**Prof. Dr. Jesper Skjødt & Lektor Sabina Rolsted -> Future Skills for an AI-Driven Workforce & How do Zealand's educators use ChatGPT in their work?**

**Prof. Dr. Hans-Werner Sehring -> Digital transformation (e.g., Digit...IARIA)**

**Prof. Dr. Lasse Berntzen -> Technology Innovation and Business Management (e.g., smart devices and AI change how we work)**

**Dr. Steve Chan -> AI-driven Decision-Making**



# Chair Introduction

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April 2025

How Does **AI** Influence the Acceptance of Business Intelligence Solutions in Switzerland?



Bridge the gap between ICT and Data Owners (e.g., **Generative AI**)



Future Skills for an **AI**-Driven Workforce & How do Zealand's educators use **ChatGPT** in their work?





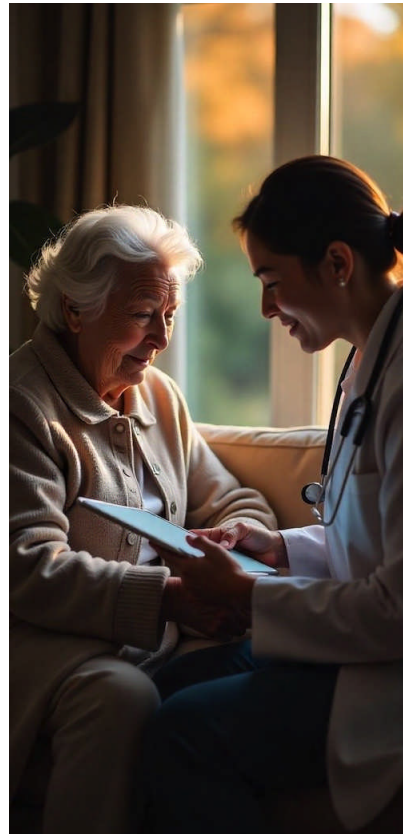
# Chair Introduction

VALENCIA  
April 2025

**Digital transformation**  
(e.g., Digit...**IARIA**)



**Technology Innovation and Business Management**  
(e.g., smart devices and **AI** change how we work)



**AI-driven Decision-Making**





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Norway



# Panelist Position

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- **How Does AI Influence the Acceptance of Business Intelligence Solutions in Switzerland?**
- **A Case Study of Swiss BI Software Company**



Viktoriia Apalkova

Haute école  
spécialisée de  
Suisse occidentale  
HES-SO

Switzerland

IT Software  
Company



Power BI

BI Solutions



Swiss SMEs

TOE

- – External pressures & readiness

RBV

- – Internal capabilities

DCT

- – Adaptability in a changing tech landscape

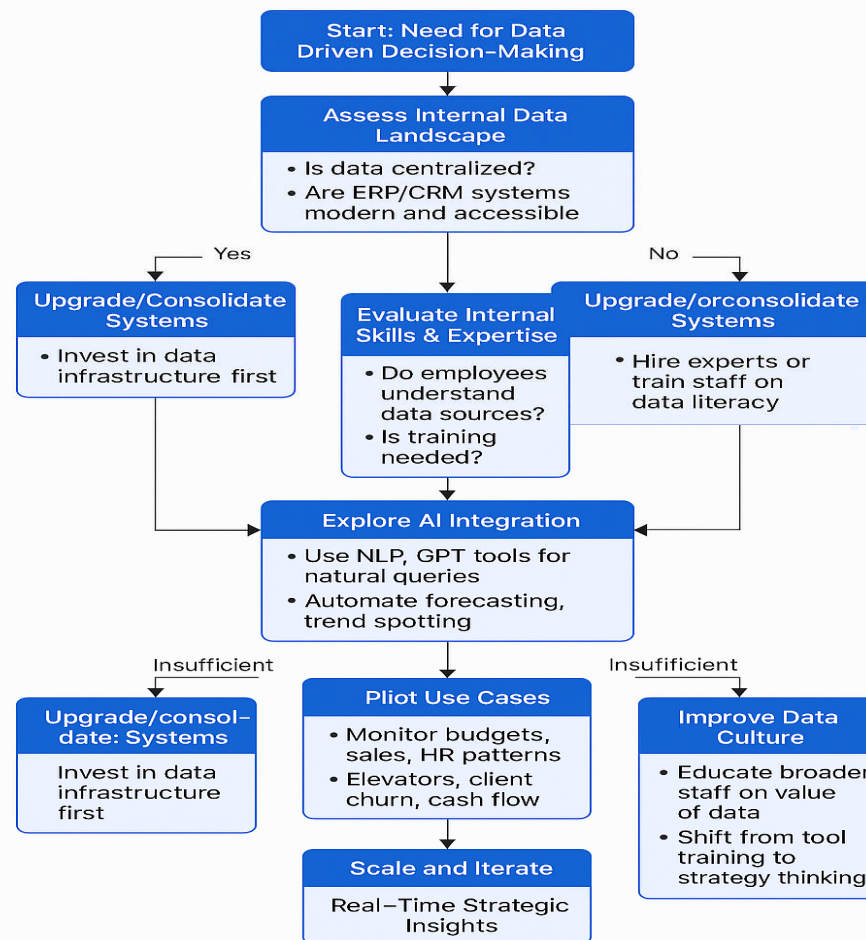


# Panelist Position

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- **ERP Data Silos:** Legacy ERP/CRM systems create integration bottlenecks for BI tools.
- **AI = Fewer Data Experts Needed:** AI-powered BI enables self-service insights via natural language, reducing reliance on data scientists.
- **Forecasting Gaps:** SMEs often lack time-series data, limiting AI's predictive power—especially in retail & manufacturing.
- **Untapped Machine Data:** Manufacturing SMEs generate sensor data but rarely use AI-BI for predictive maintenance or anomaly detection.
- **Real-Time Budget Control:** AI-enhanced BI enables dynamic budget tracking—vital for project-driven firms and services.

## AI-Enhanced BI Adoption Mechanism for SMEs (Swiss Context)



Viktoriia Apalkova

Haute école  
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HES-SO

Switzerland





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# Panelist Position

Technology Innovation and  
Business Management

## Bridge the gap between ICT and Data Owners

### Software Development Status and Development

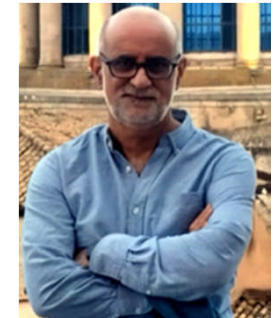
- SQL – ever popular
- Many new options and stronger decoupling of logical, and physical layers artefacts
- New standards in data & query models – *Graph Query Language* (ISO standard, 2024)
- Low-code/no-code development
- Frameworks availability for better data management
  - *Streaming; Main memory DBs; Transaction models* - serializable, causal, eventual consistency

### Hardware and platforms

- Persuasive networking & connectivity
- Cloud computing a great success (a personal opinion) – especially if not paying for it
- CPUs with a huge number of *cores*, massive and different memory devices making the storage hierarchy finer and much overlapping (e.g., *NVRAM, NVMe SSD*)

### Team composition and capacity building

- Internal, external training on continuous basis
- Should not be IT people only
- Dynamic composition



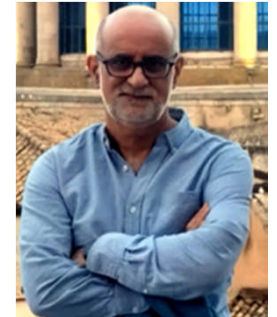
Joseph G  
Vella  
UM, Malta



# Panelist Position

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- **Hard problems**
- **Data Consumption – themes and variations**
  - Data Quality
  - Data Consistency (What business rules allow and what usage patterns support)
  - Data Provenance
  - Usage patterns (and acceptable availability)
  - Response requirements (freshness at source, freshness down the integration line)
    - *OLTP* (operational -> performance)
    - *OLAP* (tactical, and more? -> value added)
    - *HTAP* (blend of operational and tactical requirements -> performance, freshness, focused)
  - Data Security (on top of consistency and availability)
    - Including what to firewall, and what not
- **Software development productivity measures**
  - Even measuring **productivity gains** of developing software with generative AI
  - And the productivity gains to the data owner when using systems based/created on generative AI



Joseph G  
Vella  
UM, Malta



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# Panelist Position

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## ▪ Future Skills for an AI-Driven Workforce

### Technical Skills:

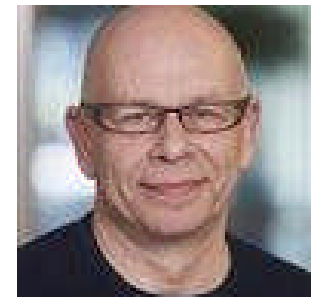
- AI & Data Literacy
- Data Analysis & Interpretation
- Cyber Security Awareness
- AI-driven Decision-Making
- Basic Coding & Automation (Python, RPA, SQL)
- Promptengineering

### Soft & Leadership Skills:

- Critical Thinking & Problem-Solving
- Creativity & Innovation
- Emotional Intelligence & Communication
- AI Ethics & Bias Awareness
- Agile Leadership & Adaptability



Sabina Rolsted  
Zealand



Jesper Skjødt  
Zealand

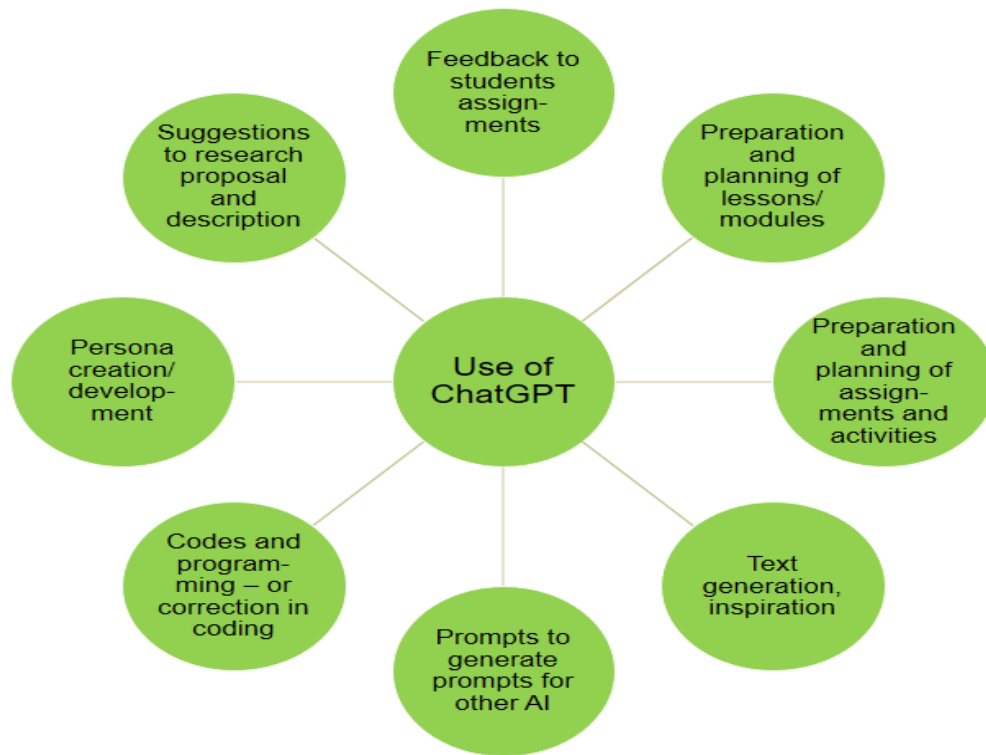


# Panelist Position

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## Our position -

- How do Zealand's educators use ChatGPT in their work?

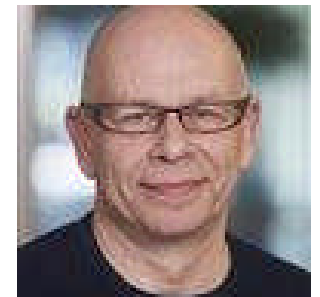


Educators use of ChatGPT/task mapping

User aspect	Technical aspect	Critical and Ethical aspect
Creativity - text generation, inspiration, persona creation	Prompting – How precise should you be?	Trustworthiness of what ChatGPT suggests, how much is true
Creativity – pictures, social media content	Coding – How much you need to understand or code beforehand	Sources – where does the content come from. The sources may be fake
Prompting – to get answer, fun and inspiration, to improve my skills, knowledge	Coding – troubleshooting to solve or find correct codes for webpages or other programmes	It is not good at mathematics but only text and arguments
Prompting – Prompt engineering to work with other AI or computational programmes		It discriminates gender, people of colour, etc.
Understanding of data – understand some topics, compare different perspectives and arguments, understand students work		Sustainability – Discussion on how much ChatGPT consumes. Should we then be more careful about how we use it



Sabina Rolsted  
Zealand



Jesper Skjødt  
Zealand



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# Panelist Position

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## Clarification of terms: **Digit...**

### ▪ **Digitization**

- Making “real-world” things available in the “virtual” space: digital representations of artifacts and processes, digital twins for analog entities
- Typically not a good choice – ignores media-specific idioms
- (At best) **quantitative advantage** to be achieved

### ▪ **Digital Transformation**

- Rethinking processes and interactions – transformation into a digital process, not a digitized analog one
- Most (companies, governments) struggle with it, laws and compliance prevent optimal solutions
- **Qualitative (competitive) improvements** of value-adding processes, of customer experience, etc.

### ▪ **(Digital) Disruption**

- Many buzzwords: “digital revolution”, “game changer”, ...
- Does not happen as often as the frequency of use of buzzword suggests
- But if it happens, then with with **high impact** (on company, domain, country, ...)



Hans-Werner Sehring  
Nordakademie,  
U of Applied Sciences





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## Digital transformation ...

- ... is a **strategy**, not a process (let alone a state)
  - Continuous improvement / agile approach
  - Guided by business goals, customer needs, etc.
  - Moving target
- ... is enabled by **technology**, not driven by it
  - Many digital processes become possible by technological advances
  - But focus should remain on need, not technical capabilities
- ... requires **continuous re-learning**, as improvements and technological changes occur
  - Users demand new communication channels
  - Easy to overdo things: information overflow due to competition for user attention, over-personalization, ...



Hans-Werner Sehring  
Nordakademie,  
U of Applied Sciences



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## Digital transformation requires ...

- ... **continuous improvement** to keep up with changing needs and preferences
  - Respond to changing requirements and preferences
  - Rethink processes
  - Learn from application experience, continuous experimentation, fail early
- ... **outside-in perspective** to keep up with changing needs and preferences
  - Focus on requirements
  - Requirements of (end-) users
- ... **courage and fault tolerance** to enable
  - Agile plan-build-run-test cycle
  - Agile principles: fail early, embrace change
  - Adapt capabilities to changing requirements and technologies

⇒ **Agile organizations**



Hans-Werner Sehring  
Nordakademie,  
U of Applied Sciences



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# Panelist Position

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## ▪ Technology Innovation and Business Management

- Centralized to decentralized. ICT as facilitator.
- From physical to digital. Information as a resource.
- From local to global. Internet as an enabler. Long tail. E-commerce.
- Smart devices and AI change how we work.
- Automation and Decision Support Systems (DSS).
- New ways of interacting with systems.
- Autonomous systems.
- Challenges – cybersecurity and ethics.



Lasse  
Berntzen



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# Panelist Position

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- **AI-driven Decision-Making**
- **Certain Clarifications are needed:**
  - The relationship between Artificial Intelligence (AI) and Machine Learning (ML)
  - The relationship between Algorithms and Heuristics
  - The relationship among Multi-Criteria Decision-Making (MCDM), Multi-Attribute Decision-Making (MADM), and Multi-Objective Decision-Making (MODM)
- **Certain Considerations are needed:**
  - Kahneman and Tversky System 1 and System 2 Thinking
  - Rasmussen's Decision Ladder Template
  - Klein/Orasanu/Calderwood/Zsombok Naturalistic Decision-Making (NDM) and the ensuing Klein Recognition-Primed Decision (RPD) Model
- **Exemplar Elements of the Process:**
  - Data collection, ingestion, and preparation
  - Algorithmic, heuristic, and methods selection
  - Model training, inferencing, and decisioning



Steve Chan  
VTIRL, VT/  
DE-STEAM



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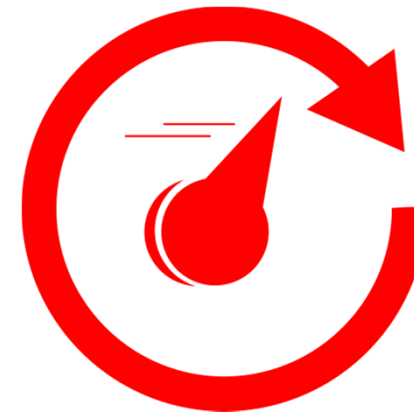
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- Traditional Fast Responses Needed (e.g., First Responders):



<https://www.commerce.gov/news/blog/2022/10/honoring-our-nations-first-responders>

- Prospective Future Fast Responses Needed:



Steve Chan  
VTIRL, VT/  
DE-STEA





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**Thank you for joining us  
at Panel #4**

**Have a wonderful conference!**