

SUPSI

Real challenges as driver for successful collaboration among UAS students and SMEs

“Strategies of digitalization” event with UAS students and SMEs

Conference: Knowledge and technology transfer of universities of applied sciences:
new directions based on proven concepts.

Olten, 3 November 2021

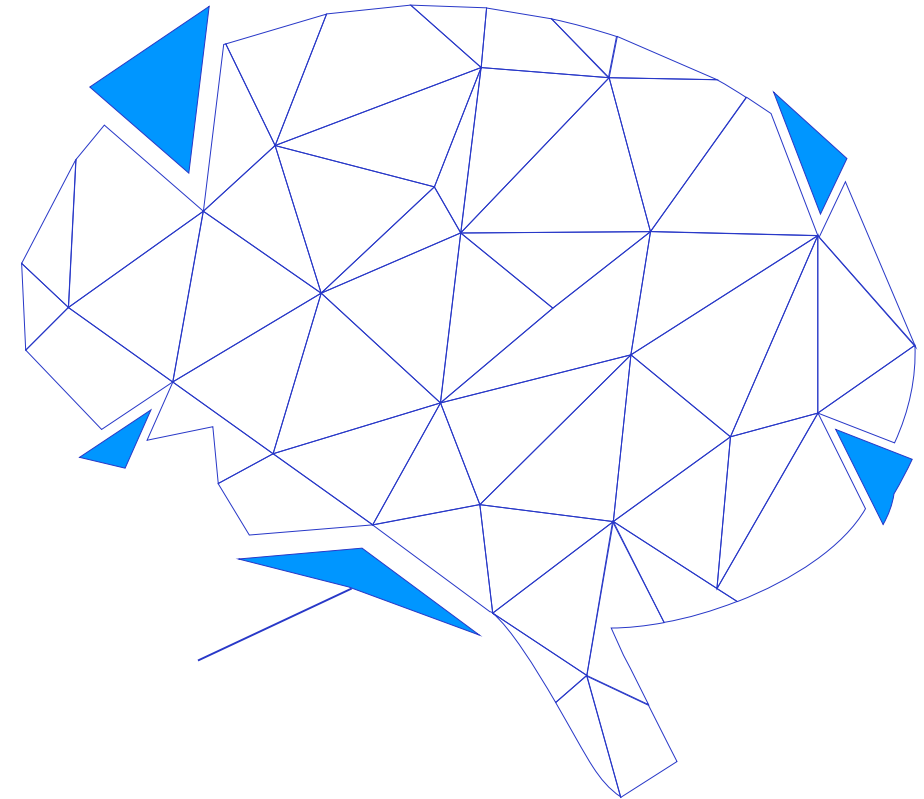
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Digital Transformation – contextual elements

- Digitization, digitalization and digital transformation have been impacting both Swiss SMEs and UAS thoroughly in the last years
- External Drivers, such as digital technology, digital competition, digital customer behaviour, are putting more and more the pressure on SMEs (Verhoef et al., 2021)
- Digital transformation requires several strategic imperatives, such as digital resources, an adequate organizational structure, digital growth strategy and relevant goals and metrics for their measurement (Verhoef et al., 2021)



Digital Transformation – enablers and outcomes

- Digital transformation of business models is based on different categories of digital enablers: digital data, automation, digital customer access and networking (Schallmo, Williams & Boardman, 2020).
- The outcomes of digital transformation are multi-dimensional, such as permeable & agile organizational structures, technology-focused & supported management, digital & customer experience-focused business models, automated & data-driven business processes, smart, customized & connected offerings, ecosystem oriented & ecosystem embedded organizations, dynamic & constantly changing industry-level performance as well as improved firm performance & new forms of value (Hanelt, Bohnsack, Marz & Antunes Marante, 2021).

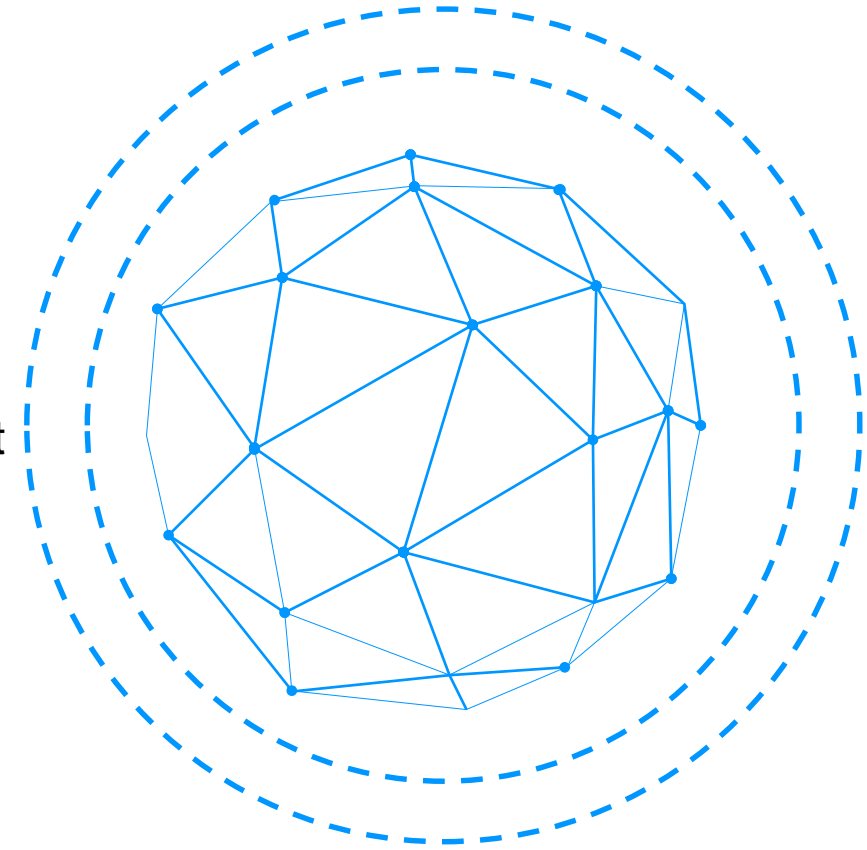


Digital Transformation and SMEs

- Despite the economic importance of SMEs, unfortunately many SMEs still lag behind larger firms in regard to **digitization, digitalization and digital transformation** and thus in taking a full advantage of positive outcomes of digitalization and digital transformation (Eller, Alford, Kallmünzer & Peters, 2020).
- SMEs need to integrate, build and reconfigure internal and external resources to adapt to rapidly changing environments. Proactive firms display a strong leadership, develop a digital mindset, have well-developed sensors for technology and market developments, learn from many sources, integrate into business ecosystems and actively promote their digital market presence (North, Aramburu, & Lorenzo, 2020)
- If properly managed, digital instruments may contribute to innovation of the business model and creating new distribution channels and new ways to create and deliver value to customer segments (Matarazzo, Penco, Profumo & Quaglia, 2021).
- Before the COVID-19 pandemic the perception of SMEs seeing the digitalization as top priority was somewhat less meaningful and there were few SMEs' need-oriented frameworks promoting digitally enabled growth (North, Aramburu, & Lorenzo, 2020)

Digital Transformation and its relevance for business administration students

- Digital Transformation is a fundamental change process enabled by the innovative use of enabling technologies and the strategic leverage of resources and capabilities that allow a redefinition of the value proposition and the entire business model (Gong & Ribiere, 2020; Schallmo, Williams, & Boardman, 2020; Ustundag & Cevikcan, 2017).
- Digital Transformation may be seen as a particular type of business model innovation, which is a challenging process and should to be taught not only at a theoretical level, but also with case studies and **real-life examples**
- **Challenge-based learning**, combined with group problem-solving, enhances professional skills development. Challenge-based learning is attributed to high potential for promoting systematic analysis and problem-solving skills



Research gap and research question

- What we do know:
 - **Challenge-based learning (CBL)** is a growing approach in higher education and has been promoted as a means for students to align the acquisition of disciplinary knowledge with the development of transversal competencies while working on authentic and sociotechnical societal problems (Nichols and Cator 2008; Nichols, Cator, and Torres 2016)
 - As more and more small businesses are starting their digital transformation (Bouwman et al., 2019; Müller, 2019), **business model innovation has become critical** (Cosenz and Bivona, 2021; Ibarra et al., 2020). Collaborative and open innovation approaches may help SMEs (Albats et al., 2021; Anshari & Almunawar, 2021; Crupi et al., 2020)
- What we don't know:
 - **RQ:** *How challenge-based learning in collaboration between students and SMEs business owners can help both (1) students developing business model innovation competences, and (2) SMEs inputs for structuring their digital transformation roadmap?*



Setting of the challenge



Strategie di digitalizzazione

Down Group Smezzera SA - Via Malto, 8, 6804 Sironico (SI) piano
 Quando: 25 settembre 2019 - ore 18.30

"Strategie di digitalizzazione"
 Sviluppare una strategia di digitalizzazione per la propria azienda

In collaborazione con SUPSI, IUFFP e studenti del Master of Science in Business Administration della SUPSI, ci saranno 3 tavoli per un'implementazione della digitalizzazione.

Si tratta quindi di un workshop dove tutti i partecipanti potranno integrare con domande e commenti sui lavori svolti nei 3 tavoli, beneficiando di un'esperienza di apprendimento per confronto e digitalizzazione sulla propria realtà aziendale.

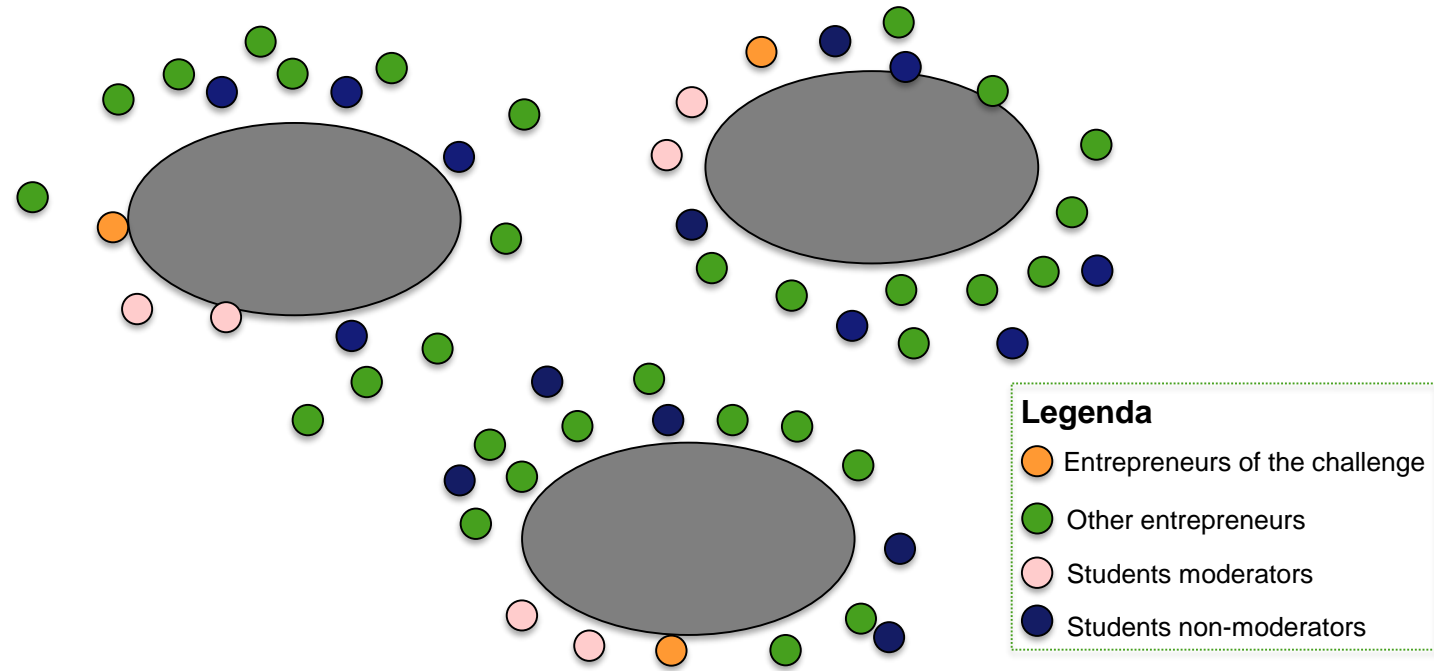
Descrizione
 "Digitalizzazione" è diventato uno tra i termini più ricorrenti nel linguaggio di imprenditori, consulenti e mondo accademico. Si parla di digitalizzazione in continuazione, il che produce una confusione. La digitalizzazione sarà il tema al centro dell'evento organizzato da imprenditori, in collaborazione con la SUPSI e lo IUFFP. Tuttavia, piuttosto che presentare dei casi aziendali e proporre una realtà, si vuole offrire un'occasione di confronto e di scambio di idee e di esperienze. Si tratta di un'occasione di confronto e di scambio di idee e di esperienze. Si tratta di un'occasione di confronto e di scambio di idee e di esperienze.



Three SMEs (with different levels of digitalization status – although all novice) that launched a real challenge to the students one week before the event

“Develop a digital transformation roadmap, considering the actual business model and digitalization maturity level”

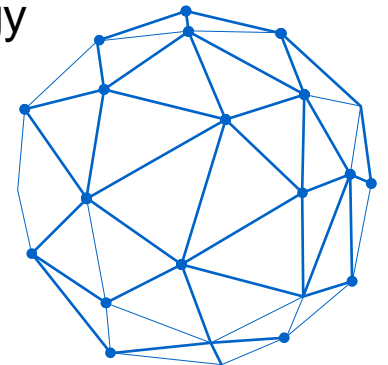
A true workshop of one evening with 40 entrepreneurs participating at the event



Everyone had a specific role during the workshop

Results and key learnings

- The output of the challenge was a report with a general assessment of the SME and some practical steps to develop a digitalization strategy
- **Key learnings of the experience for both students and entrepreneurs**
 1. **Business models** (NOT digital technologies) create customer value
 2. Understanding the **customers' jobs to be done** is the first step to develop an effective digitalization strategy
 3. An **experimentation** culture is an enabler for digitalization
 4. **Daily operations** are often a barrier to the development of a digitalization strategy
 5. The **collaboration** among companies is important to co-develop a digitalization strategy



Discussion and Conclusion

- How challenge-based learning in collaboration between students and SMEs business owners can help both (1) students developing business model innovation competences, and (2) SMEs inputs for structuring their digital transformation roadmap?
 - Challenge-based learning may provide learnings to both students and practitioners involved
 - Challenge-based learning experiences may bridge a gap between SMEs and UAS / Universities
 - Challenge-based learning is an approach to transfer the knowledge produced by researchers to SMEs
 - Challenge-based learning provides students with a direct feedback about the relevance of their learning
- Some **critical issues** and **further research**:
 - Expectations from the SMEs: pedagogical vs. company's needs → **how to balance?**
 - Timings: difficult to spend too much time on challenges → **how to revise curricula?**
 - Nature of collaboration: students and SMEs still working separately → **how to better integrate students and business owners on a continuous basis?**
 - Assessment: lecturer vs. practitioners → **what possibilities for new forms of assessments?**
 - Scalability: ratio researchers & SMEs / students has to be well managed → **co-learning for all participating actors**

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