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1. Rustichella d´Abruzzo

Modernizing the tradition: making pasta with digital

Piero Peduzzi | **CEO**

SME ID

Where : *Italy*

Sector : *Agrofood*

Digital technologies

SCADA *automation and data analytics in the pasta factories*

Blockchain *for data integrity and digital contracts*

Business intelligence *for decision support*

The Need

Internal and External reasons led to the Manager´s decision of adopting digital technologies:

- **Internal:** identification of production gaps, capacity limits and scalability challenges
- **External:** customers want more real time and detailed information on the products they are buying

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

Challenging the tradition: inherited practices - with their clear tested value - need significant internal motivation to be revisited to allow improvement

- **Motivation of the older and more experienced workforce**: difficulties to enter a training stage again, revisiting practices that they have applied for years and learning new methods, tools and processes beyond their experience so far

- **Lack of supporting funding**

Solutions

Empowerment of the workforce: understanding the value of change and involving the workers since the early stage of the innovation process

- **EU-Horizon 2020 programs**: providing funding for piloting the initial plans, interaction with key technological players and knowledge sharing to understand opportunities and challenges of the adoption

- **Looking at innovation as a "strategic aim**

The impact

On the workforce.

Workers are more motivated as they feel the company is investing in their professional growth

On the business.

The reorganization of the company structure improved customer satisfaction and increased efficiency. Decision making time is shortened thanks to data analysis, thus increasing productivity, and reducing risks.

Lessons learnt.

"To succeed, one needs to remain in constant interaction with the workforce and support them constantly through the change. Upskilling actions are a significant aspect of this support. We also learnt that outside help can be critical: experts are needed to drive change. Finally, we learnt that consistency and perseverance is critical. Once you start, do not give up. Persistence will be rewarded."

To read full interview

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2. AgdataHub

Supporting farmers in the data economy

Sébastien Picardat | **CEO**

SME ID

Where : *France*

Sector : *Agrifood*

Digital technologies

- *IoT*
- *Data exchanges*
- *Agrotechnology*

The Need

*In Europe there are approximately **10 million farms interconnected with 500 000 partners**. Traditional operators need to be helped to switch to a data-rich setting, and a clear need for farmers to take control of their own data emerged. EU farmers' organizations understood the need for a code of conduct for sharing data. Of course, governmental policies and the EU data strategy supported the switch towards technology adoption and upskilling.*

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

- ***Lack of emerging tech knowledge**: advanced digital skills are uncommon, even though farmers have a unique love of technology*

- ***Technical challenges for integration**: telecom stability in rural areas*

- ***Lack of trust**: previous tech failures have reduced user trust*

- ***Insufficient support of systems**: systems provide new features but lack in appropriate support of their established/previous functions*

- ***Scarcity of experts**: technology-aware professionals prefer to join big companies (vs. SMEs)*

- ***Access to tech support**: getting digitally trained personnel in a rural area to support the end user is a challenge*

Solutions

- ***Scaling up**: scale up the teams of users through collaboration/unions for bigger leverage*

- ***Multi-disciplinary education initiatives**: movement in engineering schools which trains appropriate experts, by combining the expertise of agronomists to engineers*

- ***Governmental support**: real support by the government to put in place a network of digital advisors, supporting the farmers and their partners in the value chain*

The impact

On the workforce.

The time to support administrative requirements (e.g. related to data gathering for quality control) has reduced, and bureaucratic overhead through automation (IoT) minimized

On the business.

Higher quality of products, lower environmental footprint, and better alignment to legal requirements.

Lessons learnt.

"Keep control on your data to develop added value on your farms. Upskill to get to know how to do this"

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CONTEXITY

3. Contexity

Empowering through AI-based transformation

Alexandros Paramythis | **CEO&CTO**

Dimitra Paramythis | **Sales & Marketing Manager**

SME ID

Where : *Switzerland*

Sector : *Software*

Digital technologies

- *Artificial Intelligence*
- *Semantic Technologies*

The Need

*To improve to use/reuse information inside the customer companies. **Applying AI tools empowers humans in processes**, improving their performance and allowing them to perform functions they previously could not.*

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

*- **Inertia**: The fear of change is very common across companies and domains.*

*- **Lack of understanding**: potential users may not understand how a technology is applicable in their domain and business cases.*

*- **Innovation and the perception of production readiness**: emerging technologies may be redirected from production to innovation departments, since people may expect that they are not mature enough for production.*

*- **Hype exhaustion**: company employees and executives may end up tired from the hype related to emerging technologies.*

*- **Lack of strategic investment decision**: in cases that the management is not ready to invest in upskilling and co-creation, the results and effectiveness of integrating an emerging technology into company functions can be dubious at best.*

Solutions

*- **Deep integration**: Close interaction with people from the company itself can create technology champions because they co-created the solutions, understand them, and believe in their added value.*

*- **Upskilling** the users and customers to be able to utilize the power that AI brings is a key component to project success.*

The impact

On the workforce.

Internal processes may improve significantly, e.g. through making internal knowledge sharing more efficient, which supports operations and workflows.

On the business.

The customers have been able to improve services and products and/or provide new services and products. We have customers that doubled the number of clients they could support, addressing more segments of their market.

Lessons learnt.

"Make sure that you understand a real problem, before you embark on a technology integration journey. Upskilling and evaluating an emerging technology go hand-in-hand. Once you understand the technology you can see whether and how it can help."

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4. CyberWayFinder

Compliance and risk mitigation paving the way towards emerging technologies

Rosanna T.S. Kurrer | **Managing Director**

SME ID

Where : *Belgium, Luxembourg*

Sector : *Vocational Training*

Digital technologies

- *Cybersecurity*

The Need

All organizations need cybersecurity because we have a talent gap, and currently the rates of such experts are sky-high, making them a scarce resource - especially for SMEs. Also, compliance requirements have been increased and, thus, experts are in even greater demand.

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

- ***Culture change***: *Cybersecurity requirements bring change across all processes and functions.*

- ***Lack of common language***: *Integrating cybersecurity needs communication across experts of different domains.*

- ***Scarcity of experts***: *Difficulty in finding cybersecurity experts.*

Solutions

- ***Communicate and build trust***: *convince people - across positions and roles - to support the effort, also highlighting the risks.*

- ***Cybersecurity as strategic planning***: *horizontal investment is critical, similarly to new tech and new equipment.*

- ***Upskilling***: *maximizing the value of existing human resources*

The impact

On the workforce.

It allows managing risk. One can also take opportunities (markets, tools, etc.), having an understanding of the related risks. The value of this understanding is especially applicable to other emerging technologies, such as AI.

On the business.

Integrating cybersecurity ascertains sustainability, stability and business continuity. Communicating an incident and showing agility and the capacity to deal with challenges, may lead to increase of trust to shareholders.

Lessons learnt.

Reskilling and upskilling of business experts is the low hanging fruit in cybersecurity.

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5.HoloHost

Rethinking resilient, secure hosting through blockchain

Jennifer Ebrecht | **Corporate Legal Council**

SME ID

Where : *Gibraltar*

Sector : *Internet services*

Digital technologies

- *Blockchain*
- *Distributed cloud computing*

The Need

Crypto companies still face extremely volatile regulation requirements. Thus, it was a regulation-driven need.

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

- ***Non-tech background**: understanding can be difficult for a non-technological person, and this is an everyday challenge.*

- ***Continuous change**: Being part of bleeding-edge innovation requires constant change and upskilling, which can reach the limits of human capacity.*

Solutions

- ***Interdisciplinary friction**: In emerging technologies it is very important to have everyday friction with tech-aware colleagues and knowledgeable people, as nothing is still fixed.*

- ***Understanding through experience**: Every day brings change, and you need to gain your knowledge through experience.*

The impact

On the workforce.

Technologies get tightly coupled with our everyday practice: from finding a doctor, to moving around, to meeting people to communicating and collaborating. On the other hand, the use of decentralized technologies for data protection is critical for tomorrow's everyday digital interactions.

On the business.

Decentralization of information will increase trust, increase security, and reduce risks.

Lessons learnt.

"It was very important that I worked on emerging technologies early, because it makes my services unique. [...] It is totally worth it to invest in upskilling oneself, open one's mind with new things, and widen your professional targeting to an international level. This is doable exactly by upskilling and daring to join the change. [...] emerging technologies are not all about tech: they need all types of skills to support them."

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6. SayItLabs

Digital Health - Improving stuttering condition with games

Erich Reiter | **CEO&Co-Founder**

SME ID

Where : *Belgium*

Sector : *Medtech*

Digital technologies

- *AI*
- *Big data*

The Need

Very low actual specialization concerning stuttering: the percentage of speech and language pathologists that can offer real support regarding this speech disorder is problematic

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

Revisiting education in your 30s *is challenging: change in the professional and personal life can increase risk, especially if you are moving to a new domain of knowledge and related profession.*

Solutions

*- **Investing in communication** to break cross-cultural and cross-disciplinary barriers as a company value*

*- **strong sharing of knowledge** and interaction across all disciplines: sharing and upskilling practice as a foundational process.*

The impact

On the workforce.

Strong self-motivation. The interaction with the whole team led to an even more open innovation culture that has supported a lot.

On the business.

Upskilling requires being agile in learning and in action. Especially in SMEs, people can cross pollinate into roles beyond their titles. Thus, upskilling can allow people to work in multi-disciplinary teams and undertake more than one role to enable progress of the team as a whole.

Lessons learnt.

"If you feel the fire, you have to jump. Do not expect to know exactly what will happen and how. You have to have faith in the journey combined with a realism for implementation challenges. However, search for a mentor to guide you and support you.When you are ready and have confidence in your skillset, start and enjoy the road. The more you know, the more you notice. Cross-disciplinary learning broadens the vision and possibilities"

To read full interview

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7.Nanometrisis

Combining two emerging technologies to change the (nano-)world

Antonis Stellas | **Data Scientist**

Vassilios Constantoudis | **Product development Director**

SME ID

Where : *Greece*

Sector : *Nanotechnologies, materials*

Digital technologies

- *Nanotechnologies*
- *AI, Machine learning*

The Need

Internal and external reasons led to the decision of combining AI with (nanometrology) software:

*- **Internal**: network of collaborations and connections to academia that facilitated the upskilling of the company; data availability that acts as an infrastructure for AI-driven methods.*

*- **External**: signals from the industry and R&D departments; success of AI adoption in similar domains.*

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

*- **Lack of cross-disciplinary experts**: finding personnel that acts as a bridge between the nanometrology / nanotechnology domain and AI is not trivial.*

*- **Building customer trust**: bringing a new technology (strongly presented in the public sphere) challenges trust in performance, explainability, etc.*

Solutions

*- **Upskilling new scientists**: training of young colleagues that would carry the best of both worlds (nanometrology and AI).*

*- **Highlighting cross-disciplinarity**: Upskilling itself can make the customer feel that they are talking with an expert that understands both the business needs and the value of applying novel technologies to tackle these needs.*

The impact

On the workforce.

Integrating AI launched an internal initiative to better record, understand and utilize data. It also made us constantly invest in upskilling and remaining updated with respect to the newest methods, tools, and practices.

On the business.

Applying AI in this domain is a path that needs to be examined step-by-step, considering pre-existing experience and practices. Thus, the business results are yet to be evaluated.

Lessons learnt.

"One needs to identify challenges and needs, to examine whether pre-existing solutions are appropriate. [...] Multidisciplinary is critical in this process, but also brings in challenges in communication between involved parties. [...] internal communication and constant updates are vital to achieve a smooth integration and to maximize the positive impact of the emerging technology uptake."

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8. Unique Network

Where marketplaces meet a powerful, user-friendly blockchain experience

Irina Karagyaur | **Business developer**

SME ID

Where : *United Kinadom*

Sector : *Software*

Digital technologies

- *Blockchain*

The Need

The movement towards Web 3.0 formed a clear opportunity, based on the token economy (tangible/intangible). There were many use cases that offered opportunities and paved the way to the utilization of blockchain as a foundational component of the company.

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

Lack of basic understanding *could be an obstacle both for non-techies and techies that want to utilize the provided tools*

Mapping the basic technology with business cases*.*

Solutions

Building an ecosystem*: For IT people / developers the ecosystem is critical. Several thousand followers across social media and communities are trying to empower and facilitate this ecosystem. Ambassadors can be assigned to help scaling the communications.*

Interaction with the community*: interaction with the community (which is strong in the blockchain ecosystem), can increased one's know-how to a sufficient level to undertake different and exciting roles.*

The impact

On the workforce.

New roles in the dynamic environment of the blockchain, the Metaverse and Web 3.0. Overall, the technology essentially empowers creators. It allows them to innovate in this all-new world, possibly creating new professions and roles that will participate in the future of Internet.

On the business.

The integration of the technology brings agility, may support gamification, and allows innovation. It supports the combination of different modules / components to form a variety of solutions, from the simplest to the most immersive and complex experiences of Web 3.0.

Lessons learnt.

"Essentially all industries can take advantage and innovate using blockchain-based technologies. The community is your teacher and in there opportunities arise. Join the ecosystem to understand the type of opportunities that exist out there. Sharing knowledge in itself allows building collaborations and new projects. You can also bring social impact through the community and the technical tools, regardless of where you live, regardless of physical borders and barriers."

To read full interview

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9. Block.co

Supporting brands transitioning to NFT space technologies

Alexis Nicolau | **CEO**

SME ID

Where : *Cyprus*

Sector : *NFTs (Not-Fungible Tokens)*

Digital technologies

- ***Blockchain credentialing*** *for documents and electronic files*

The Need

Internal*: willing to follow the evolution of the technologies to avoid becoming outdated in a very volatile and novel environment*

External*: digital spaces have become significantly more populated during the COVID-19 era directly affecting the promotion, exposure and sharing of brands and products. This impact combined with the rise of blockchain and NFTs creates a wealth of opportunities and challenges for bringing the two worlds together.*

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

Business development*: the idiosyncrasies, vocabulary of business development and marketing channels are different from traditional settings*

Brand new ecosystem*: an innovative, agile viewpoint to interact efficiently with the ecosystem is required*

Solutions

Gain basic technical knowledge *to allow synergies between business experts and technical experts, critical for success.*

Strong interaction with the local ecosystem*: the local University was the space where blockchain technology had its established experts. The academic knowhow brought in was very significant as part of the company capacity.*

The impact

On the workforce.

The blockchain revolution brings into play a completely new reality in the up-and-coming digital spaces. Pioneering such a change, with support from academic experts that lead the change significantly, changes the drive and motivation of the team daily.

On the business.

The actual achievement will be examined in retrospect soon. This is the price and excitement of leading an innovative effort.

Lessons learnt.

"Embrace technology to reduce fear, to get a better understanding of what it means. Allow yourself to err and improve. Know the change. Take the human into account, take emotional intelligence into play, through experience. Develop yourself technically but keep the soft skills aspects as well. The collective knowledge of the team is critical: together we stand better".

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Global3CCS® Compliance - Control - System

10. Global3CCS®

Promoting the Innovation culture in The Canary Islands

Pepe Betancort | **Board of Directors**

SME ID

Where : *The Canary Islands (Spain)*

Sector : *Waste management*

Digital technologies

- *AI*
- *Blockchain*

The Need

Global3CCS is a consulting cluster providing Industry4.0 solutions to the local SMEs.

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

***People motivation**: making clear what is going to change, how, and the benefit the change will bring to keep the morale up and welcome innovation.*

***Appropriate investments** and **resources**: knowledge transfer needs commitment, training, and capacity building.*

***Adaptation** to the organizational structure and processes: uptaking new technologies means a change in the management process. Employing young people (more prone to change and innovations) help in the change of mentality through time.*

Solutions

***Empowerment of the workforce**: commitment for change is needed across all levels of management and the workforce.*

Investment for capacity building and attracting new talent.

***Training the whole workforce**. Innovation and upskilling should be seen as a continuous process, making sure that improvement is ascertained one step at a time.*

***Aiming for technology-aware change as a strategic decision**: innovation needs to be a long-range goal*

***Short-term milestones** and apply iterative, **strategic evaluation**: the feasibility of the application of an emerging technology to a new domain should be revisited periodically.*

The impact

On the business.

Increased productivity, performance, and comfort across company functions, which are elements expected to increase innovation readiness and capacity, facilitating further change and minimizing the related risks. Bringing emerging technologies into a company offering does change a company's image and improves branding

Lessons learnt.

Upskilling and innovation means Improvement, means wanting to improve, improve everything

To read full interview

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11.Next Solutions S.A.

Empowering citizens´ finance management

Katerina Kopsacheili| **Product Director**

Giorgos Gavriil| **CEO**

SME ID

Where : *Greece*

Sector : *Fintech*

Digital technologies

- ***AI****-enabled assistant to interpret the user´s financial data and improve user experience*

The Need

the product has been originally designed with the aim of interpreting data in a domain where removing cognitive biases can be very successful and data are in abundance. AI offered a clear pathway to achieve this.

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

Lack of sufficient understanding *of AI: need to better understand AI, with respect to its requirements, its potential, and risks.*

Uncertainty of the volume of data available *to effectively scale up*

Solutions

Training workshop*: to increase the understanding of AI and converge to a company strategy regarding the introduction of AI into the product*

Launch of pilot projects *to increase the affinity to the technology and hone the management skills regarding such technology projects*

Data gathering and integration *to better evolve the ideas and put them to practice*

Bring businesspeople into play*: integrating an emerging technology affects all company workflows*

The impact

On the workforce.

While originally the technology seemed exotic, the upskilling allowed the workforce to bring the understanding needed to apply it realistically

On the business.

Integrating AI did change the innovation capacity. It allowed the start-up to further strengthen its pre-existing innovation viewpoint and to help match ideas to technical methodologies.

Lessons learnt.

"Start early because understanding more allows you to see more. A hands-on experience and increased understanding of the potential allows one to better evaluate whether the integration of the technology makes sense, but it also opens up new options and ideas for products, workflows and services"

To read full interview

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12.Smarthink

Training the workforce of tomorrow

Lucilla Crosta | **CEO**

SME ID

Where : *Italy*

Sector : *EdTech*

Digital technologies

- ***AI*** *and* ***Machine Learning*** *to provide recommendations for a personal / individual training: which content is more appropriate for the specific*

The Need

Feeling that the market was looking for something new, especially with the Covid-19 outbreak (e.g., technologies for remote working). Strategic view on the future of education. A lack of key soft and transversal skills, necessary for bringing innovation in the company, for solving problems, for building effective teams and so on, was expressed by company Executives.

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

Communication gap *between ICT and non-ICT personnel know-how*

Technology seen for the first time*. Skepticism about the tool*

Solutions

Convergence *to a common vocabulary and understanding of the technical details and their impact to everyday practice*

Co-planning *of every phase of the process with both executives and workforce. Good, advanced planning and training were key for a smooth process*

Making informed decisions *about the workers' upskilling process to give value to the talent of everyone and to reinforce the skills of those where existed gaps*

The impact

On the workforce.

Improved day to day operations without limits of space and of time. Development of some more new digital skills because of the automation process. Feeling of belonging to the company value proposition and company value. Enhanced communication skills to be able to describe the product.

On the business.

Integrating AI gives a unique value proposition, combining different aspects, from (human) learning/teaching theory to technology, to achieve a journey of self-development for workers. The introduction of emerging technologies is now fully part of the everyday work. It impacts 100% the work and our upskilling process. It simplified and helped scaling the offers, while reaching very far away geographical area.

Lessons learnt.

"One needs to keep a growth mindset, an upskilling culture, to not be left behind. Upskill your workers continuously."

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13.3D Bear

Changing the education landscape through emerging technologies

Jussi Kajala | **Managing Director**

SME ID

Where : *Finland*

Sector : *Education & Training*

Digital technologies

- *AR/VR*

The Need

Internal and External reasons led to the Manager´s decision of adopting digital technologies:

***Internal**: identification of market opportunities; top-level decision for pivoting towards more holistic, digital solutions*

***External**: feedback from clients; discussions with investors; extensive workshops with stakeholders*

Path to the adoption of Digital technologies

Main obstacles to the technology adoption

***Pivoting challenges**: Moving from the previous physical setting (3D-printing-based) to the AR/VR setting, meant replacing part of the workforce based on their skillset*

***Expertise challenges**: AR/VR/3D-world experts are difficult to recruit*

***Challenging mark**et: education landscape is typically highly bureaucratic and trust is difficult to build, especially in the presence of emerging technologies*

Solutions

***Significant recruiting effort**: also reaching abroad*

***Continuous reskilling/upskilling**: strategic decision for innovative, agile culture*

***Upskilling in-domain experts vs learning from scratch**: bringing teachers as potential collaborators*

The impact

On the workforce.

Allowed operating remotely, breaking down location barriers

On the business.

Improved sustainability: Increased reach and accessed new markets; business continuity in the presence of health challenges (e.g. COVID-19); innovative practice led to collaborations with big players.

Lessons learnt.

"Many words and phrases come to mind: big impact, big opportunity, keep an open mind, extend partnerships, gain win-win situations. One has to have a holistic approach to the use of emerging technologies. [...] Have clear strategic goals and identify clear upskilling processes to maximize your impact."

To read full interview

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