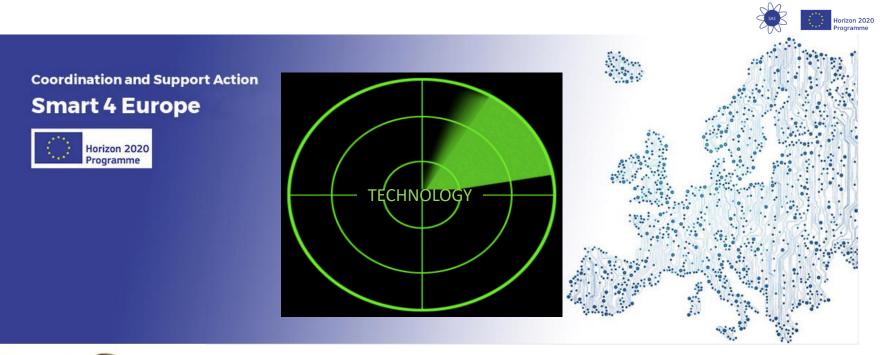
Technology and Innovation Radar





Haydn Thompson THHINK

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Why?



- SMEs and Mid-Caps struggle to keep track of new technologies that may be important to their business in the short, medium and long term
- Aim to provide a useful reference for the SAE community highlighting up and coming technologies that SMEs and Mid-Caps can exploit, as well as the current maturity of these technologies
- The radar has evolved over three years with input from desk research, questionnaires and workshops

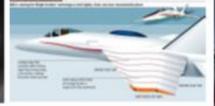




Horizon 2020

Future Technologies (Examples)

















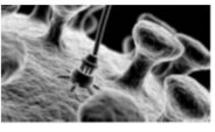


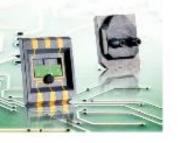










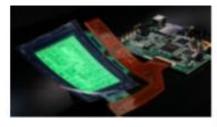






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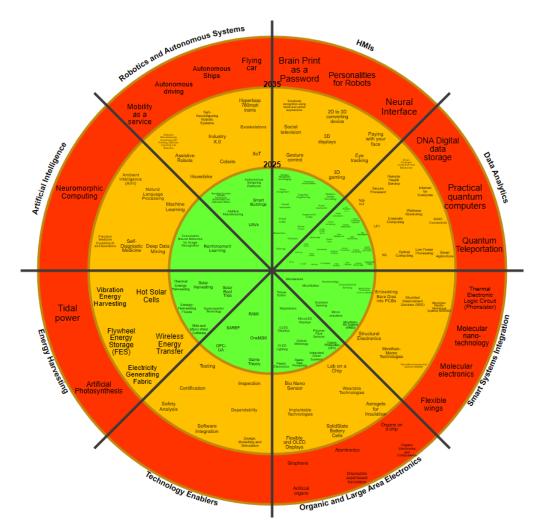
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Online Clickable Radar





Green – technologies that SMEs and midcaps can consider to be mature in the short term

Amber - technologies that are coming in the 2025-2035 timescale that SMEs/midcaps should be aware of for the future and may have an interest in that they may wish to monitor

Red – technologies that are still very immature and should not be considered at this time

- Currently 172 technologies covered
- Can zoom in and out on tablets, mobiles, android devices, etc.
- Clicking on technology brings up short description



http://www.thhinkbv.com/docs/New1Radar/index.html

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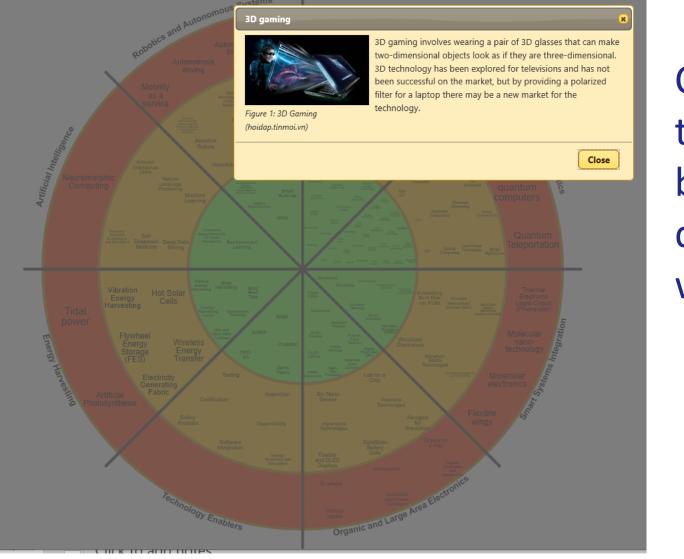


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Technology Descriptions





Clicking on topics brings up description window

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Application Domains - HORIZON Europe Pillar 2



6 CLUSTERS AS PRIORITIES IN HORIZON EUROPE PILLAR 2

Global Challenges & European Industrial

Competitiveness: boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals Commission proposal for budget: € 52.7 billion



Clusters in 'Global Challenges and European Industrial Competitiveness'

Clusters	Areas of intervention				
Health	Health throughout the life course Non-communicable and rare diseases Tools, technologies and digital solutions for health and care, including personalised medicine	Environmental and social health determinants Infectious diseases, including poverty-related and neglected disease Health care systems Culture, cultural heritage and creativity			
Culture, creativity and inclusive society	Democracy and Governance Social and economic transformations				
Civil security for society	Disaster-resilient societies Protection and Security	Cybersecurity			
Digital, Industry and space	Manufacturing technologies Advanced materials Next generation internet Circular industries Space, including Earth Observation Emerging enabling technologies	Key digital technologies, including quantum technologies Artificial Intelligence and robotics Advanced computing and Big Data Low-carbon and clean industry Emerging enabling technologies			
Climate, Energy and Mobility	Climate science and solutions Energy systems and grids Communities and cities Industrial competitiveness in transport Smart mobility	Energy supply Buildings and industrial facilities in energy transition Clean, safe and accessible transport and mobility Energy storage			
Food, bioeconomy, natural resources, agriculture and environment	Environmental observation Agriculture, forestry and rural areas Circular systems Food systems	Biodiversity and natural resources Seas, oceans and inland waters Bio-based innovation systems in the EU Bioeconomy			

Radar chosen applications areas designed to link with HORIZON Europe priorities

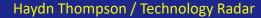




New applications in traditional and non-traditional ICT sectors



- Of particular interest is the potential application of SAE technologies in sectors that are traditionally non-ICT sectors.
- Desk research, talking with projects, visiting exhibitions and brainstorm meetings.
- An aim has been to identify applications that could be of interest to SMEs in all member states based on the universal need and interest for the applications by society in general.
- Overall a large number of potential applications have been identified for which SMEs could develop new concepts.







Ocean Monitoring - The oceans drive our weather systems and there are many issues as a result of pollution, not only of oil but also from plastics which is currently become a key concern for the society. Here there are many interesting applications predicting weather, identifying, tracking pollution and cleaning up pollution and also in monitoring sea life in all its forms.

Smart Clothing and Wearables – People are utilising smart devices for health and well-being, for sports and increasingly in the medical sector. The applications of smart clothing go beyond this leading to new ideas for identity, fashion and interaction.

Home Automation – This affects us all and increasingly buildings and

systems, security systems, entertainment systems and also HMIs such

homes are being equipped with efficient energy management

Added Application Domains

as Alexa to allow interaction with devices.

Smart Agriculture - Food is a universal need and agriculture is a major business across Europe in both the developed and less developed countries. Here increased information is revolutionising farming removing risk for farmers, making life easier though automation and monitoring the supply chain from field to fork.





Horizon 2020







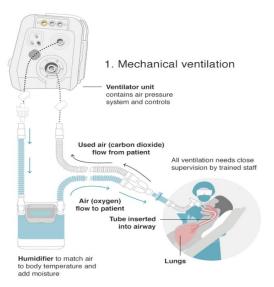




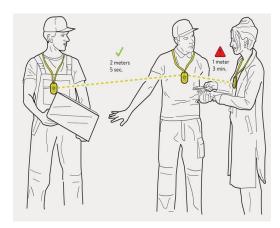
8

Technologies to Combat COVID-19











Horizon 2020 Programme





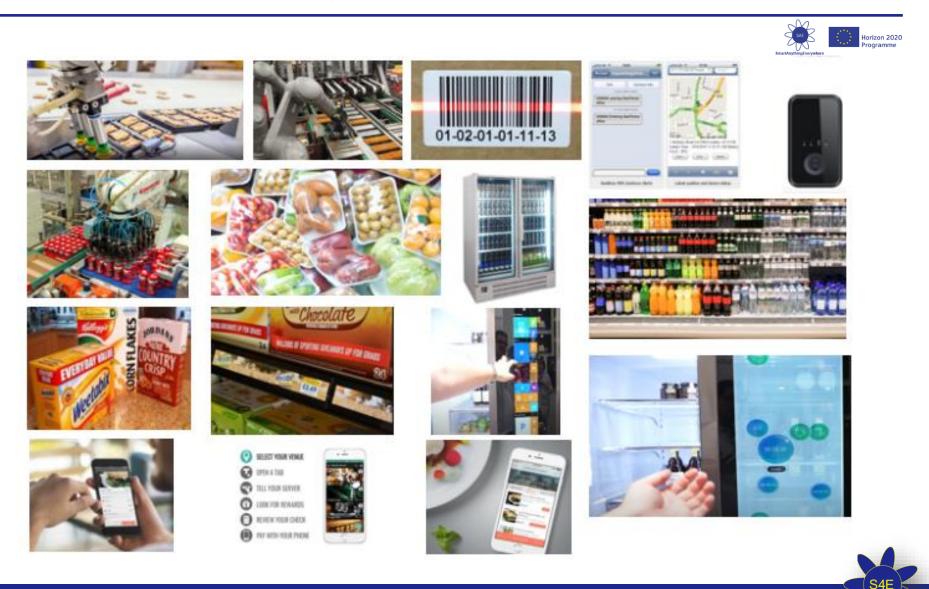
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Food and Beverage



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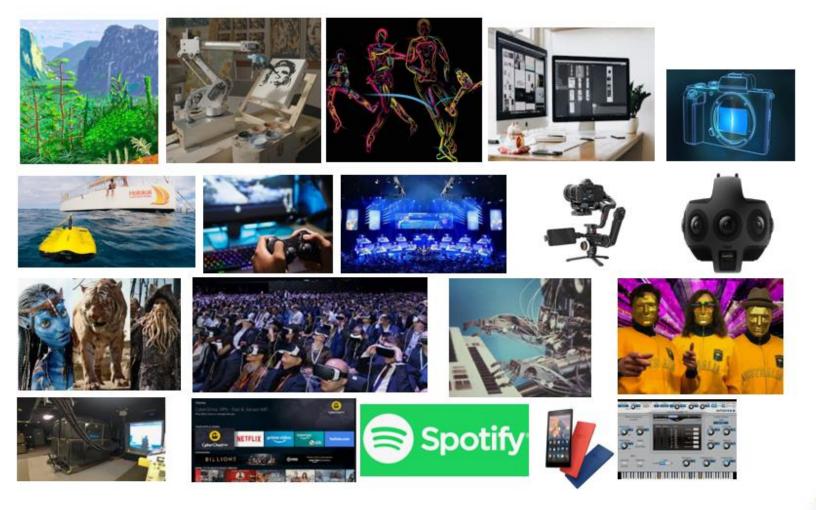


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Art, Entertainment, Music and Literature







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Agriculture

Introduction Barriers to Uptake

- Arable Farming
- Livestock Monitoring and Meat Production
- ▶ Fruit Farming

Home Automation

Ocean Monitoring

Wearables

Technologies to Combat COVID-19

Food and Beverage

Art, Entertainment, Music and Literature



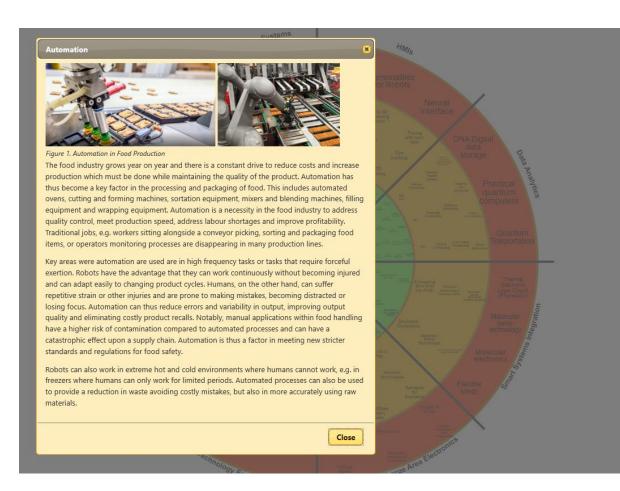
Application domains represented as accordions that open up with content





Sublevels





ne Automation an Monitoring trables trables to Combat COVID-19 d and Beverage d Production utconstion ot Tracking in Production raceability Through to the Costomer d Packaging

- Food Shops
- Restaurants
- Food Delivery

http://www.thhinkbv.com/docs/New1Radar/index.html

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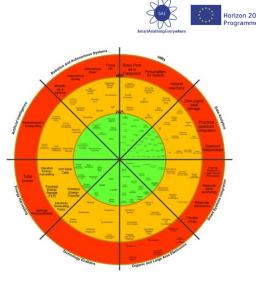
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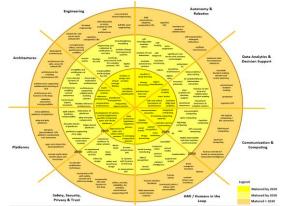
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Technology Radar – How can you contribute?

- Looking for new technologies being pursued (Note have 172 already!)
- Do you have examples of technology use addressing new application domains, e.g. agriculture, farming, food and beverage, etc.?
- Are there technology gaps which would benefit from research and development?







Technology Radar Working Group



Three main aims:

- To consider new and exciting applications of technologies (could be supported via cascade funding) and represent these on the radar.
- To consider improvements and new radar areas, in particular, to target non-high tech SMEs.
- To consider new and upcoming technologies and how they may be exploited by SMEs.



Mural Session – Activity 1 To consider new and exciting applications of technologies



Activity 1 Gathering Applications

Note could be from your funded projects or things you have heard about



Please add your Post-its with 3 pieces of information

- Technology application (web link if you have one)
- Underlying technology being exploited if specific, e.g. VR
- Your initials

Post-it colour coding

- Green it is available now
- Orange it will become reality in 2-3 years
- Yellow it will be available in 4 years +



How to add a Post-it

 \times





 \square

 \rightarrow



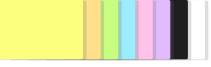
boxes to write down your ideas.

Drag and drop sticky notes, titles or text

3x3 STICKY NOTE

Text





CIRCLE STICKY NOTE



Agriculture	Home Automation	Climate	Health	COVID	Food and Beverage	Art ar Entertair
Con Monitoring	Alexa	€	S 0 A-	A [∗] T □	6	• 🔁

Edit text and place



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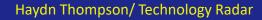
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Most exciting application – the one you would most like to see!

You have 5 votes

Click on the Post-it that you want to vote for.



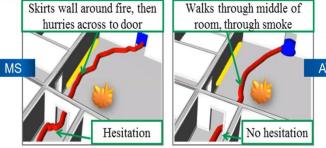


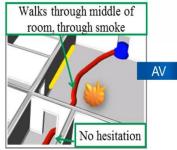
Activity 3 Non-Tech Applications

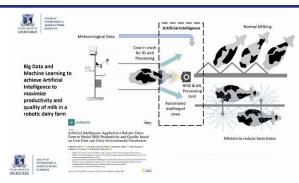
Automated Recognition of Cattle Features for Data Extraction

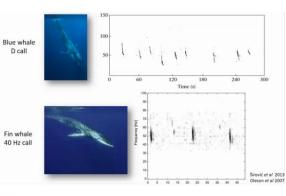












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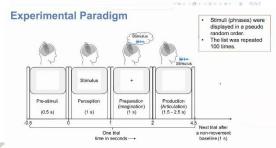
Understanding Shloka

Gurur Brahma Gurur Vishnum Gurur Devo Maheshwaraha Guru Sakshat Parabrahma Tasmai Shree Gurave Namaha Meaning: 0

Oh teacher, I see you as Brahma, Teacher I see you as Vishnu, Hey Guru I see you as Maheshwaraha (Shiva). You are the lord of Lords, I bow unto thee.



Figure: Identification of hand gestures to comprehend the meaning of a Shloka (Guru Stuti).





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Mentimeter question – Are you aware of interesting examples of new technologies being used in non-tech applications?

Non Tech Sectors

- Construction
- Tourism
- Retail

Traditional Areas

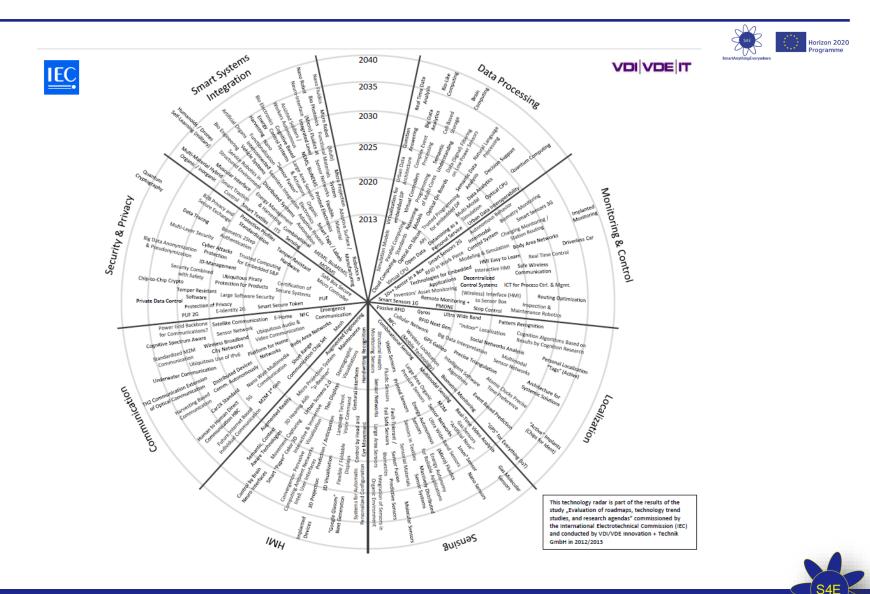
- Production
- Transport (autonomous cars, etc.)
- Financial

Mentimeter question – Are there new technologies that are currently missing from the radar which should be included?





Activity 4 Other Radars or Reports? – e.g. IEC Radar, 5E Project

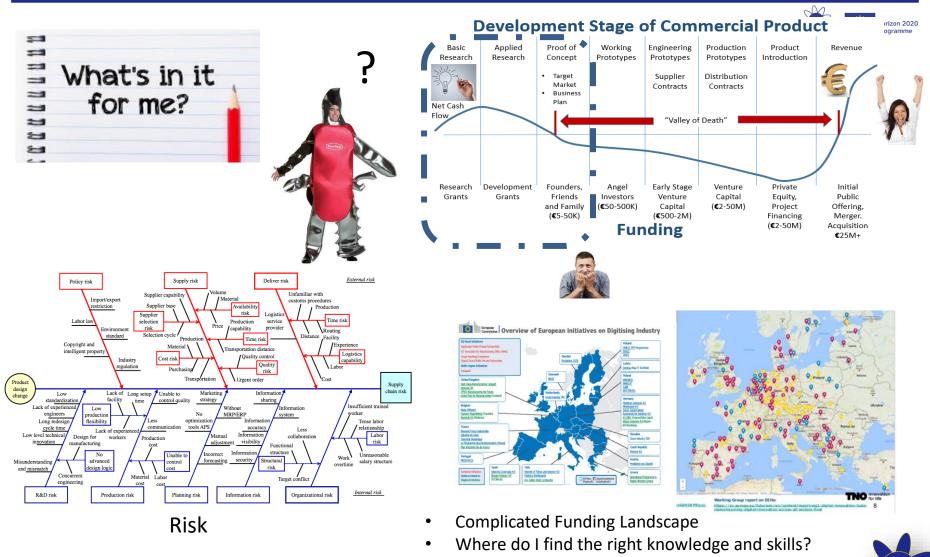


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Activity 5 Engaging with SMEs SME Perspective – "I'm busy – make my life simpler"



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How best can we promote the radar to the target SME audience?

Do you have suggestions?



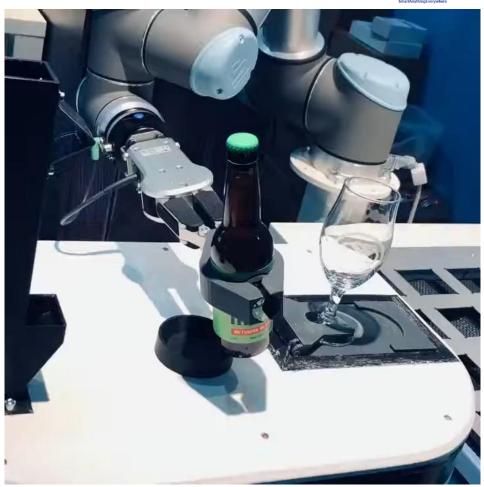


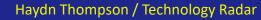
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Thank you!

Please don't forget to fill in the feedback questions







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