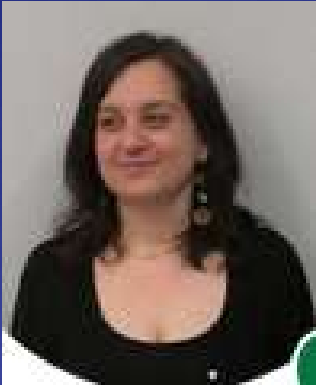


Tools & Services 4U: The SAE Marketplace, Technology Radar and Innovation Readiness Tool



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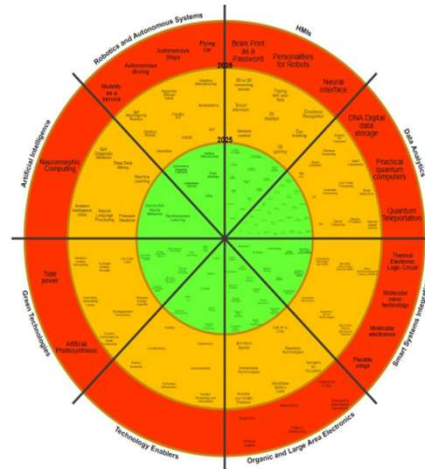
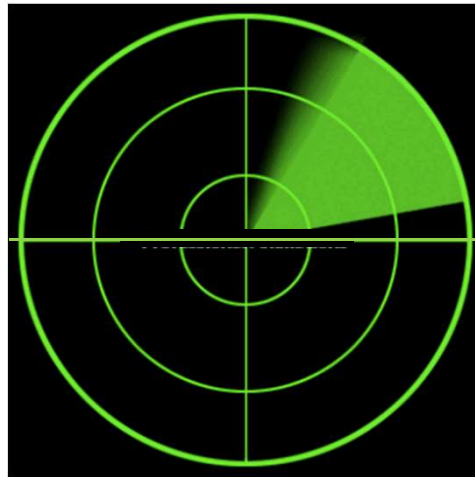
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Green Technology Radar

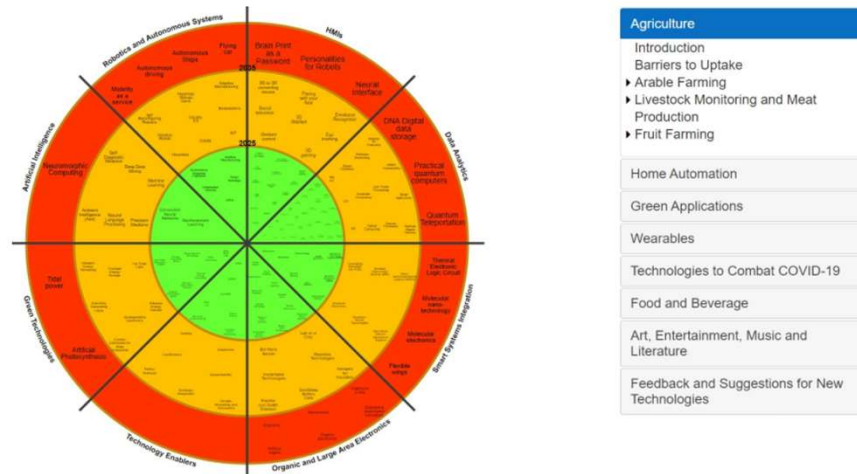


Agriculture
Introduction
Barriers to Uptake
▶ Arable Farming
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▶ Fruit Farming
Home Automation
Green Applications
Wearables
Technologies to Combat COVID-19
Food and Beverage
Art, Entertainment, Music and Literature
Feedback and Suggestions for New Technologies

- 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.
- A comprehensive Technology and Innovation Radar has been developed covering up-and-coming SAE technologies
- The radar provides a useful reference for the SAE community highlighting up and coming technologies that can be exploited, the current maturity of these technologies and examples of applications that SMEs can relate to.



Online Clickable Radar



Clickable Version of Radar created

- JSON web service. Can zoom in and out on tablets, mobiles, android devices, etc.
- Clicking on technology brings up short description

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/mid-caps should be aware of for the future and may have an interest in that they may wish to monitor

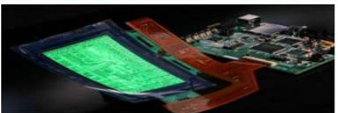
Red – technologies that are still very immature and should not be considered at this time

Information on 200 technologies

Provides

- Overview of Technology
- Technical Challenges
- Commercial Barriers
- Green Opportunities

OLED Displays



OLEDs can be printed onto any suitable substrate by an inkjet printer or even by screen printing, theoretically making them cheaper to produce than LCD displays. OLED displays can also be fabricated on flexible plastic substrates, leading to the possible fabrication of roll up displays and embedding of displays into fabrics or clothing.

Technical Challenges: The main technical challenge with OLED displays is burn in. This is because the panel is organic. Innovations are still needed to increase the efficiency, lifetime, and light output of OLED devices. Key challenges are development of device architectures and materials systems (particularly blue) that allow for improved stability and efficiency. There is also a need to find new methods to extract the light generated by an OLED.

Commercial Barriers: OLED technology is less mature than LED technology. A commercial challenge is that LED technology is improving at the same time in terms of lighting performance and pricing. This is driving the need for both improved performance and reduced costs for OLEDs. To achieve this investment is needed in manufacturing technology and infrastructure. To reduce cost there is a need to improve the yield (panel-to-panel colour, brightness consistency) and reliability (premature failure rate) through improved manufacturing processes. Notably with OLED technology it is also possible to decrease production costs using roll-to-roll manufacturing with printing deposition processes giving greater throughput.

Green Opportunities: A key attribute of OLED technology is reduced power consumption.

Close Feedback

<https://smartanythingeverywhere.eu/services/> OR <https://www.thinkbv.com/docs/New1Radar/index.html>



Applications “Accordion”

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In the UK a ship is being developed called the SeaVax [1] which is a giant ocean vacuum cleaner. The expectation is that this will be able to suck up to 22 million kgs of plastic a year. The aim is to suck up all sizes and types of rubbish which is then ground down and stored in the SeaVax tanks. It will be powered by solar and wind-power and will be autonomous. Sensors will be used to detect the rubbish as well as sonar technology to protect marine and bird life. The first ship has been built but significant funding is required to build more.

Figure 1: SeaVax (Source: www.blue-growth.org)
 [1] http://www.blue-growth.org/Blue_Growth_Technology_Innovation/SeaVax.htm

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	<ul style="list-style-type: none"> 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 diseases Health care systems
Culture, creativity and inclusive society	<ul style="list-style-type: none"> Democracy and Governance Social and economic transformations Culture, cultural heritage and creativity
Civil security for society	<ul style="list-style-type: none"> Disaster resilient societies Protection and Security Cybersecurity
Digital, industry and space	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

