



**Innovation Fostering in Accelerator  
Science and Technology  
Kick-off  
Welcome Address**

Mike Lamont

# BHAGs!

- *"Our immediate goal is to **develop ideas and devices** that we hope to see one day at the core of the next generation of particle accelerators – filing at least a couple of patents on the way!"*.
- *"Our long term goal is definitely more ambitious. We hope to merge the competences and experience of accelerator laboratories and universities with those of innovative European companies, to **create an innovation ecosystem** favourable to new ideas that might provide accelerator science with much-needed tools to face the crucial challenges ahead."*

Maurizio Vretenar

# European Strategy for Particle Physics Update 2020

*Ursula Bassler (CERN Council President)*

- **Innovative** accelerator technology underpins the physics reach of high-energy and high-intensity colliders. It is also a powerful driver for many accelerator based fields of science and industry.
- Accelerator technologies need to be developed intensively to explore the potential of possible alternatives, and similarly their application for other purposes and in other fields.

R&D roadmap on critical accelerator technologies to be established and coordinated among CERN and the National Laboratories (HFM, RF, Muon Collider, PWFA, ERL)

# Co-factors stressed strongly

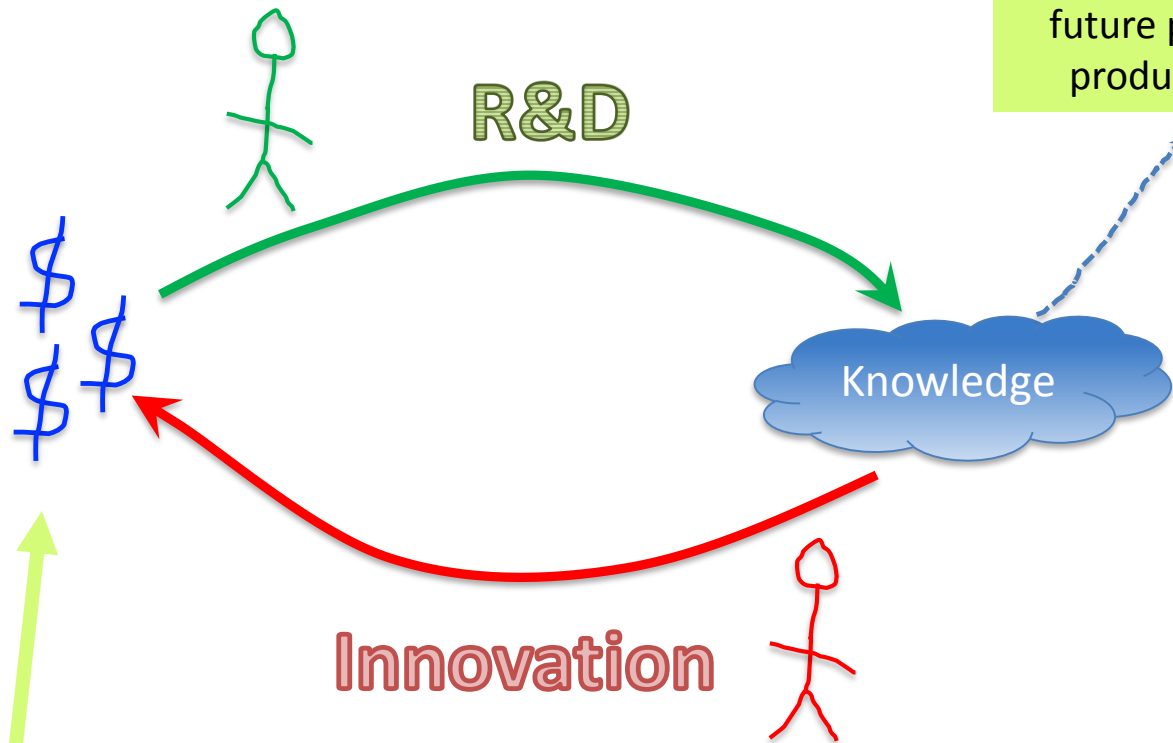
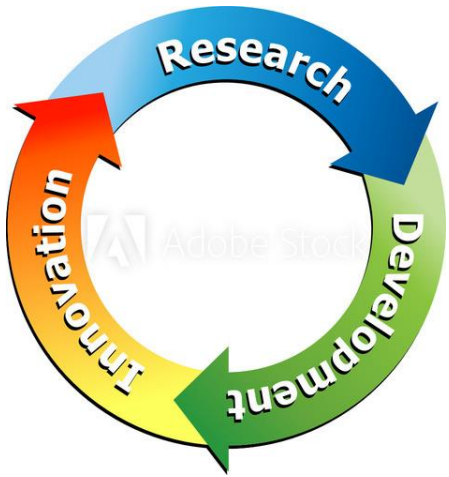
A pair of hands, one light-skinned and one dark-skinned, are shown holding a globe of the Earth. The hands are positioned as if supporting the globe from below. The globe shows continents in various shades of green, yellow, and brown, and oceans in blue. The background is a solid grey color.

- Sustainability, environmental and societal impact
- Public engagement, education and communication
- Social and career prospects for the next generation
- **Close connections with other branches of science and industry in the framework of common projects** in order to foster the efficiency of both R&D and KT for society's benefit

# I.FAST objectives

- **Boost innovation** in and from the particle accelerator-based Research Infrastructures
- Support technologies to ensure the **long-term sustainability** of particle accelerator-based research
- Support the ongoing transfer of particle accelerator technology into **applied science and societal applications**
- Create and maintain an **Open Innovation ecosystem** around the particle accelerator-based Research Infrastructures

**Aligns well with the spirit of the ESPPU**  
**Not surprising, we are part of the zeitgeist!**



Acc. R&D to meet the demands of present & future projects. Cutting edge technology but product orientated rather than innovation

For \$\$\$ read Knowledge Transfer, sustainability, socio-economic benefits...

# I.FAST

- **Addresses the loop**

- Impressive breath of innovative applications of cutting edge technology
  - Materials, Plasma/laser, Light sources, LTS/HTS magnets, SRF, Additive Manufacturing, ML, vacuum...
- Sustainability (both for in-house and KT)
- Societal application of accelerators
- Strategies and milestones for accelerator research and technology
  - Domain dependent complementarity with the incoming ESPPU roadmaps
- Engagement with industry
- Importantly, wide involvement
  - 48 partners from 15 countries: 8 accelerator laboratories, 12 national research centres, 12 universities, and 16 industries including 11 SMEs.

**Real opportunity to blaze a trail on a scale  
favourable for agility and innovation!**