



# Ireland's RIS3 strategy



**Dublin, 3-4 July 2014**  
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# Questions for Peer Review discussions:

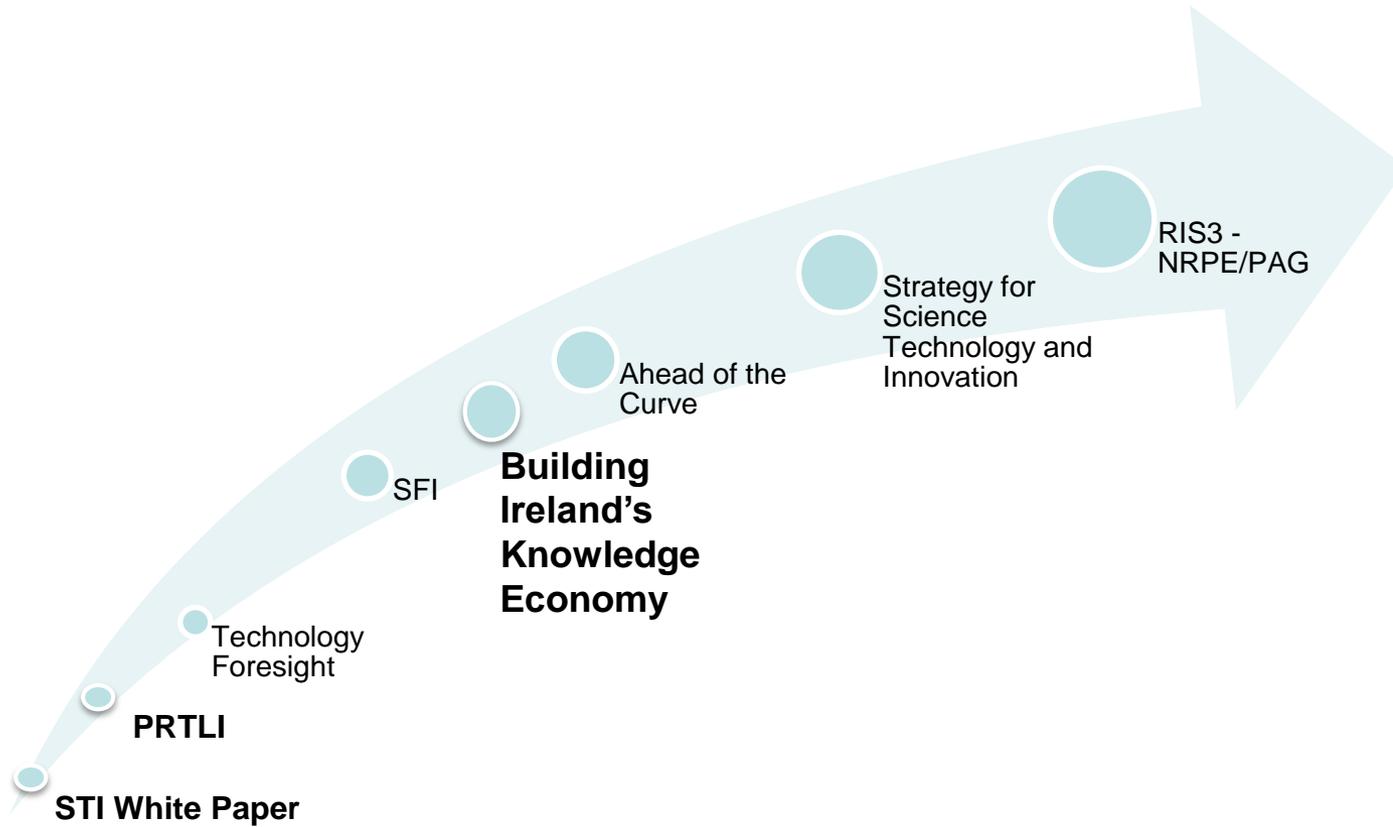


1. How can non-technological SMEs or enterprises in traditional sectors be further supported through the RIS3?
2. How can international collaboration be further encouraged in the context of smart specialisation?
3. How can the involvement of entrepreneurs, higher education institutions, users and civil society be further strengthened in the ongoing implementation of the smart specialisation strategy?
4. How can demand-side policies such as public procurement and public sector innovation support the smart specialisation areas?
5. How can policy learning from RIS3 implementation be optimised in the further implementation of RIS3?

# Trajectory of Ireland's R&I Policy and Strategy

2000

2013

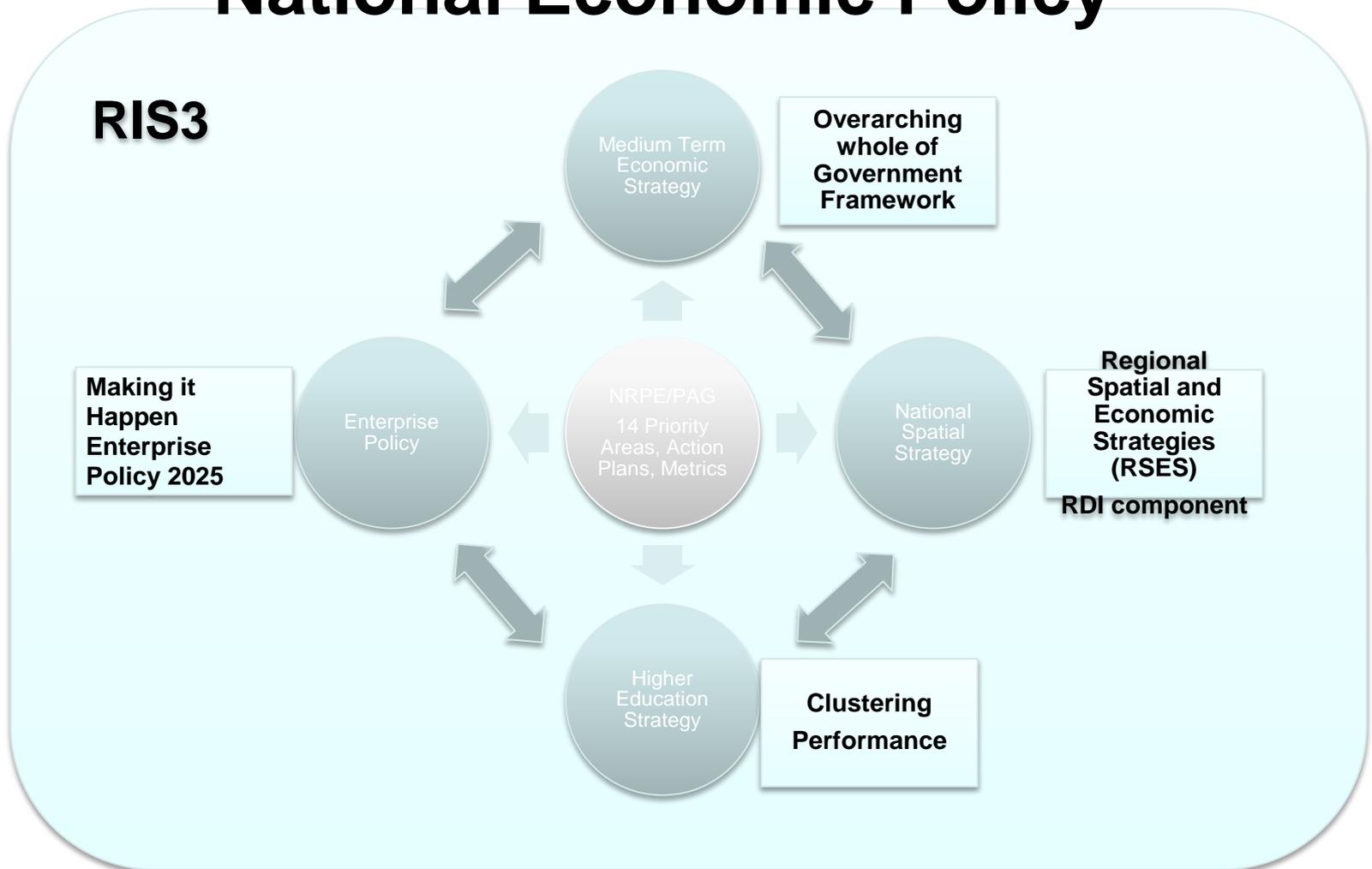


Capacity Building in Enterprise and the Public Research Base

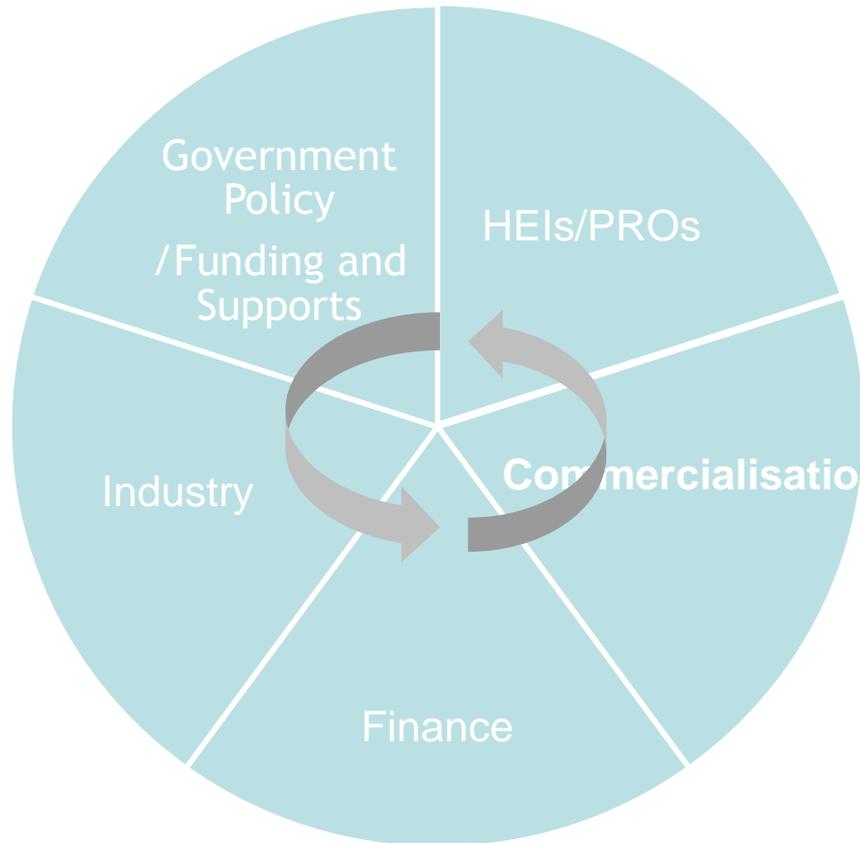
Focusing investment for economic impact



# Research and Innovation within overall National Economic Policy

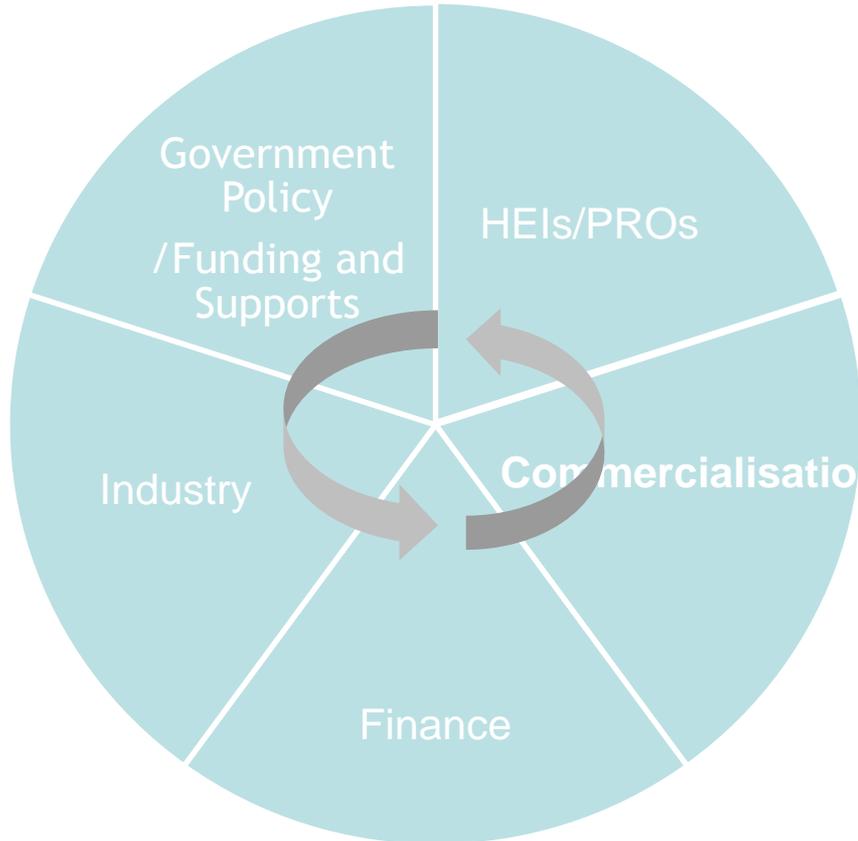


# Current National Competitive Advantages



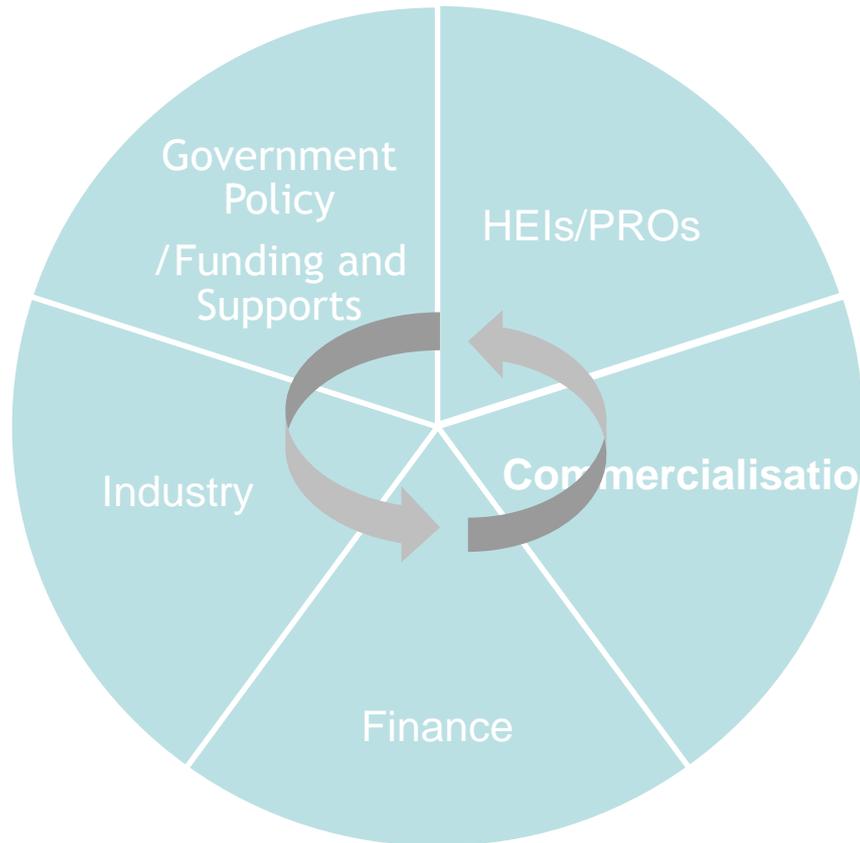
- Research-active HEIs supporting internationally competitive research centres aligned with enterprise base
- BERD in line with EU 2020 profile - two-thirds of GERD
- Competitive export-oriented innovative enterprise base
- Network of technology transfer offices underpinned by central TTO (Knowledge Transfer Ireland)
- New industry friendly IP Protocol
- Experience of international collaboration by research and innovation system

# Current Key Challenges



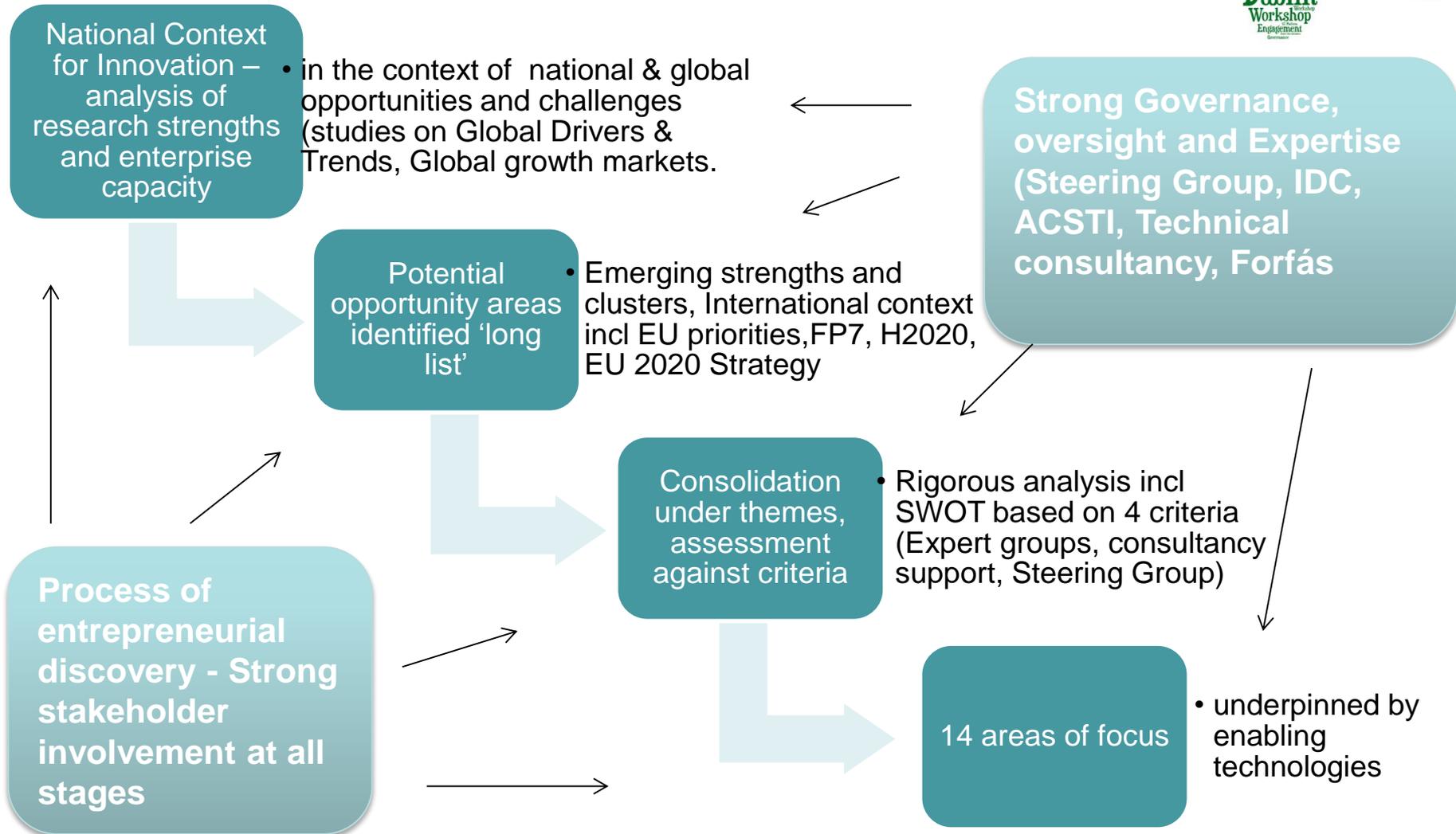
- **Accelerate the economic impact of the research and innovation investment**
- Maintain excellence within the research and innovation system
- Maximise commercialisation of research output
- Align research and innovation system with enterprise opportunities
- Enhance technological and non-technological innovation in enterprises, including uptake of new technologies

# Current National Policy Opportunities



- **Prioritisation/specialisation of research and innovation areas of investment**
- Coordination of funding agencies and realisation of impact
- Areas become the focus of future research and innovation investment that is oriented towards the Irish enterprise base
- Work in conjunction with the enterprise base to ensure outputs in the priority areas meet their ongoing and future needs

# Focus – Identification of Priorities



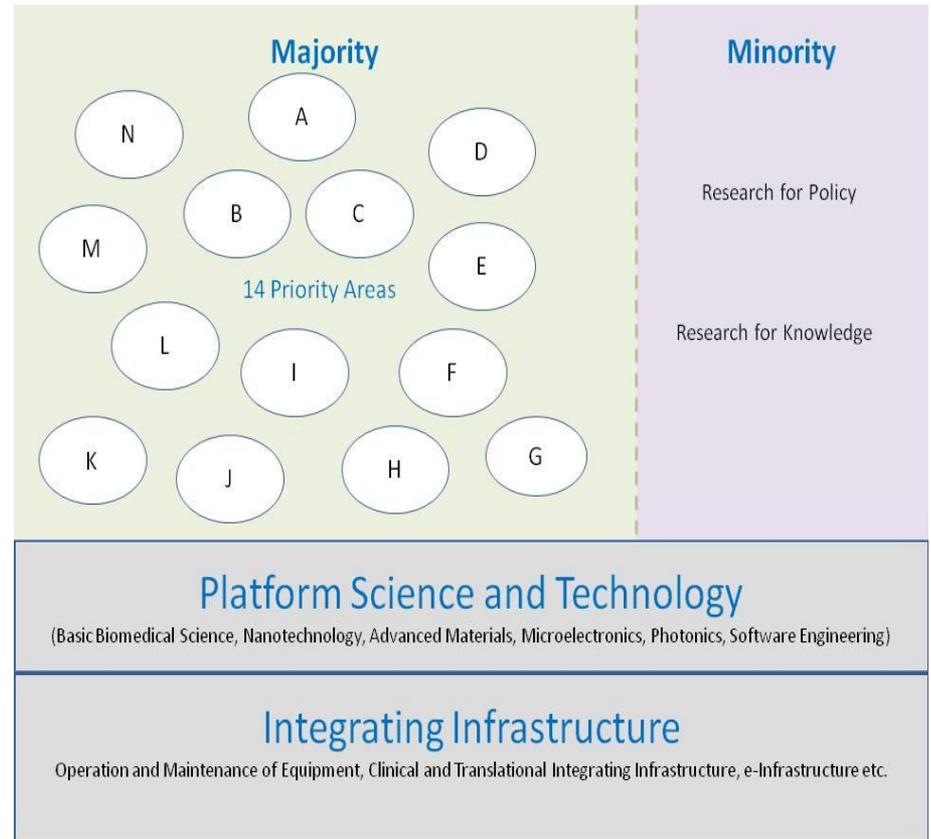
# Opportunity Areas within wider STI System



## Priority Areas for Publicly-performed Research 2013-17

A Future Networks & Communications	H Food for Health
B Data Analytics, Management, Security & Privacy	I Sustainable Food Production & Processing
C Digital Platforms, Content & Applications	J Marine Renewable Energy
D Connected Health & Independent Living	K Smart Grids & Smart Cities
E Medical Devices	L Manufacturing Competitiveness
F Diagnostics	M Processing Technologies & Novel Materials
G Therapeutics – Synthesis, Formulation, Processing & Drug Delivery	N Innovation in Services & Business Processes

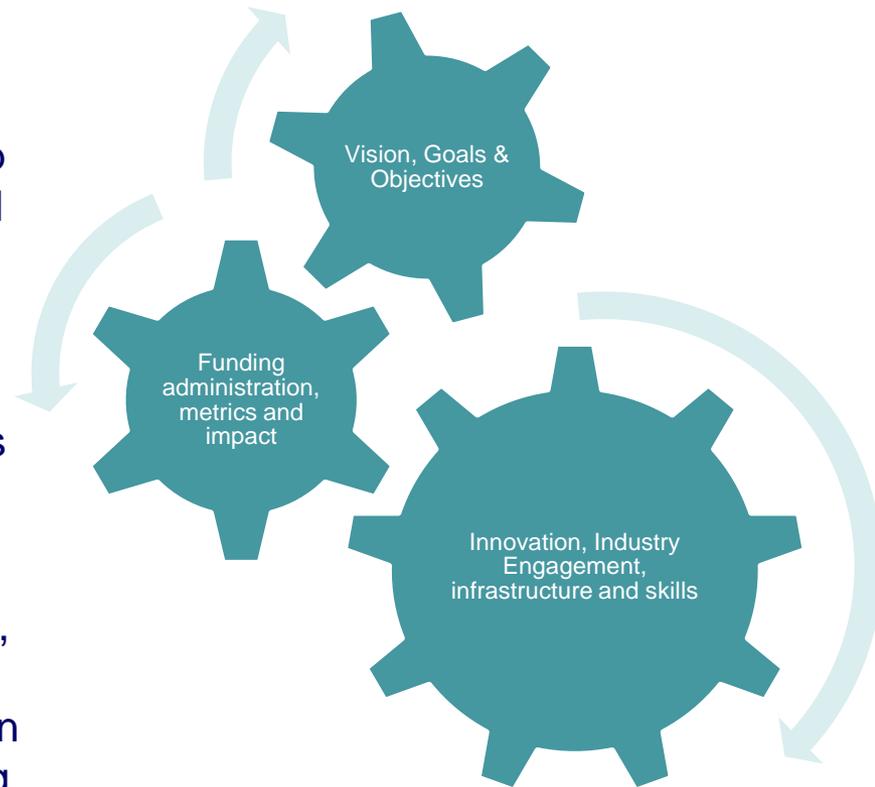
## Priority Areas and the Wider STI System



# Improving the innovation process

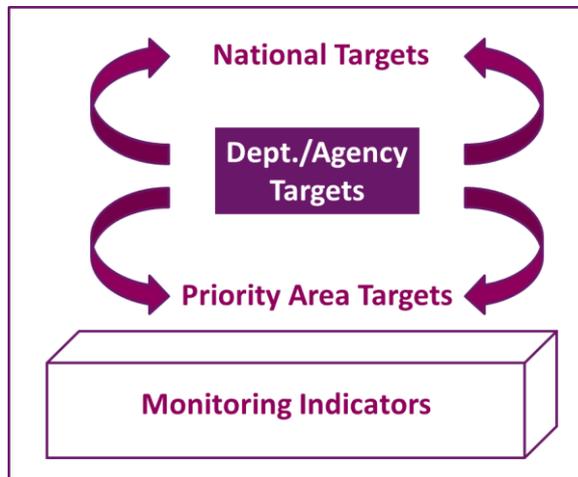


- RPSG identified 13 Recommendations to improve the efficiency and effectiveness of the national STI system
- Focus areas identified based on a bottom-up entrepreneurial discovery process supported by strategic intelligence about national strengths
- Focus areas where research and enterprise strengths are aligned to market opportunities or national challenges
- Implementation structures promote coordination ensuring an effective policy mix, leveraging private investment, maximise synergies and build critical mass to deliver on vision and support continuous policy learning.





# Measuring the progress



- Research Prioritisation incorporates a set of concrete, achievable goals in the form of a multi-level framework of metrics and targets
- Initial focus of RP applies to the five-year period 2013-17 and the goals relate to the same timeframe
- Targets were developed in conjunction with the agencies and departments with responsibility for their delivery to ensure that they were achievable over this timeframe
- Framework comprises three levels of targets as shown
- These targets will be underpinned by a set of Monitoring Indicators: a list of 79 lower-level metrics; serve as a diagnostic tool to pinpoint weaknesses in the system and to identify where remedial action is required

# Place-based Dimension of RIS3



- Ireland's RIS3 is a national strategy but informed by regional competences
- Certain priority areas are more important to the economy in certain regions
- The enterprise base in a priority area typically spans more than one region
- Research and innovation needs in companies are multi-disciplinary often drawing on research strengths nationally

## RIS3 Approach:

- to increase consolidation of research effort nationally through collaboration and increase enterprise engagement with HEI research,
  - support regional competitiveness through minimising duplication and maximising impact,
  - building critical mass and differentiated research competencies and skills regionally, aligned to local and national enterprise needs.
- 
- Higher Education Strategy is promoting clustering and critical mass in HEIs to deliver critical mass in the regions
  - Local Government Reform Act 2014 provides for regional spatial and economic strategies which will encompass regional innovation capacity, investment, knowledge transfer and skills

# Looking beyond our boundaries



- RIS3 development addressed external context:
  - Background studies commissioned by Forfás on: Global Market Opportunities, Growth Markets and the Positioning of the Irish Enterprise Base; and Drivers, Trends and Societal Issues from a National Perspective in a Global Context
  - Analysis of principles associated with consultative prioritisation exercises in other countries (UK, Sweden, Denmark, the Netherlands, and Japan)
  - Discussions with invited experts from three of the countries reviewed (Denmark, Sweden and UK) and with an expert from the European Commission on the mechanisms by which priorities were identified and implemented in these jurisdictions
  - Special workshops on approaches to research funding in New Zealand and Israel were also facilitated by Steering Group members during the process.

# A brief overview of transnational cooperation activities (within the RIS3 context)



- Since 2013 SFI has new legal powers to fund research projects on an all-island basis as well as participate in international collaborative funding schemes
- Collaboration Agreement between SFI and the Northern Irish Education Ministry allowing Queen's University and the University of Ulster participate as full academic partners in SFI's Investigators Programme
- SFI-HRB-Wellcome Trust Biomedical Research Partnership has funded a number of biomedical and clinical research projects in Ireland
- SFI funded researchers are currently engaged in approximately 1,800 academic collaborations spanning 68 countries
- Ireland – Northern Ireland – USA R&D Partnership Scheme
- SFI International Strategic Cooperation Awards covering China, India, Brazil and Japan
- Enterprise Ireland has a number of specific measures designed to assist established client companies to engage in research and explore business opportunities in international markets.
- National Strategy and target for participation in Horizon 2020 adopted with ongoing implementation and monitoring
- Active engagement on ERA pillars: researcher careers and mobility, joint programming, research infrastructures, knowledge transfer

# Entrepreneurial dynamics



- Ireland's RIS3 was undertaken to select areas to focus RD&I investment where Ireland had a realistic chance to excel and therefore maximise impact of RD&I investment on the economy
- Based on a strong evidence base and rigorous analysis combined with stakeholder (broad based) judgement
- Extensive stakeholder involvement through a number of mechanisms
- Stakeholders were involved in the development and validation of the 14 action plans and are also currently engaged in identifying gaps in the research base in the context of industry research needs
- Action plans for the priority areas are living documents and can be developed and revised by the PAG as progress is made
- Policy mix and implementation instruments put strong emphasis on enterprise and higher education institution collaboration
- Priority areas are subject to review by the PAG with a view to ensuring that the opportunity associated with each is being realised and that the area merits continuing priority status

# Key Enabling Technologies



- Manufacturing a crucial sector for Ireland - employs 210,000 people directly (11% of employment), and as many people again indirectly - substantial capacity for jobs growth
- Importance of KETs: Continued and concerted effort needed to address barriers to growth in manufacturing. Companies operating in an intensely competitive global arena and although Ireland's cost competitiveness has improved over recent years, it is imperative that we continue to drive structural change and sustained improvements in our competitiveness.
- Ireland has made a significant investment in the KETs in the last decade and is currently funding a number of Research and Technology centres which focus on KETs, including:
  - Advanced Manufacturing: EPRC (DCU), MSSSI (UL), ICMR/I2E2
  - Advanced Materials: AMBER (CRANN), IComp
  - Biotechnology: SSPC, PMTC and NIBRT
  - Micro & Nano-electronics: Tyndall National Institute, MCCI
  - Nanotechnology: Tyndall, AMBER (CRANN), MSSSI(UL), Inspire
  - Photonics: iPIC, NCLA (NUIG), Tyndall
- KETs reflected in 14 Priority Areas and Underpinning Technologies
- Continuing support for development and deployment through Research Centres and Technology Centres programmes and other EI and IDA supports

# Budget

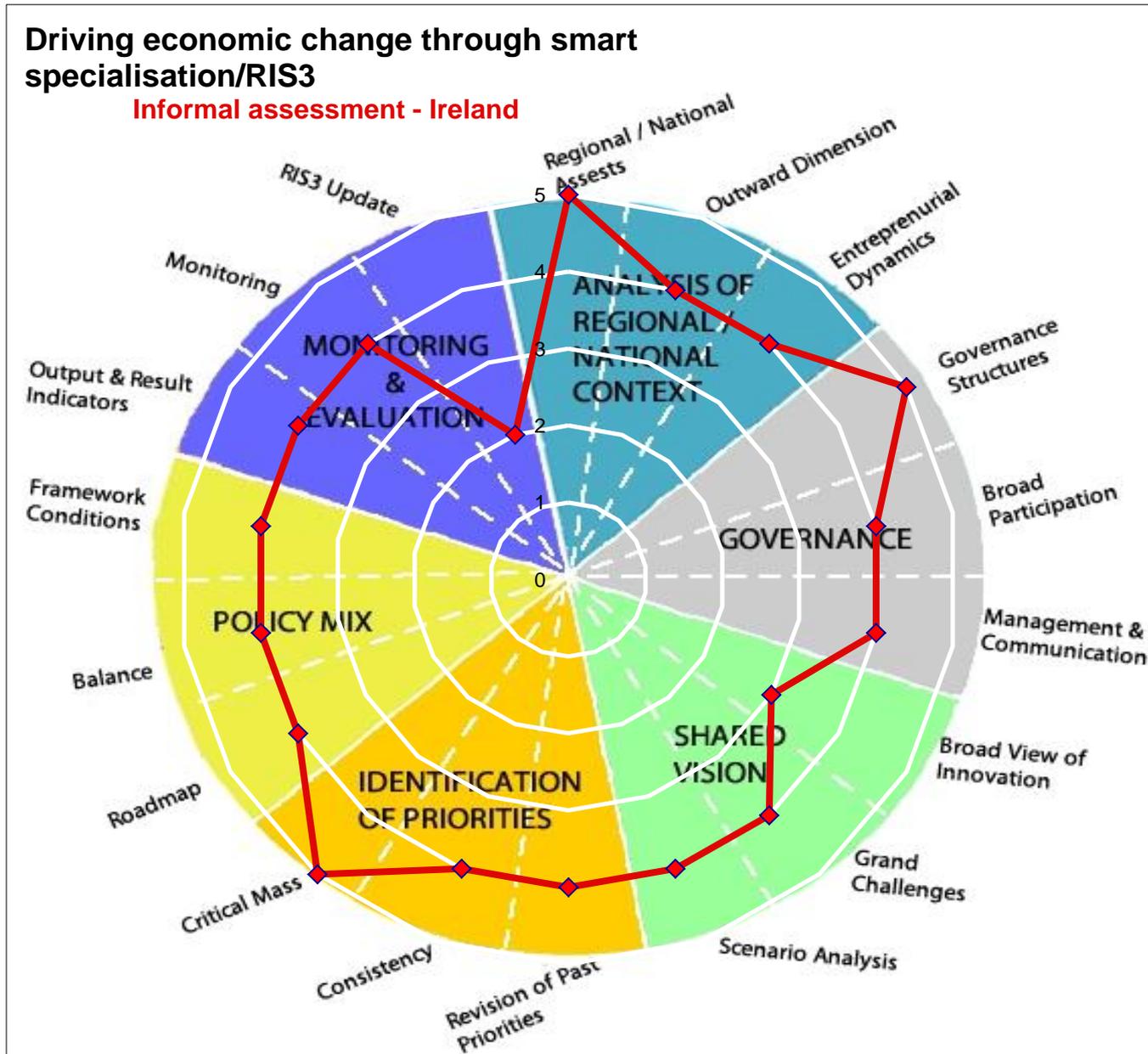


- Stimulation of private RD&I investment: STI policy mix includes focus on support to the enterprise sector to help build their innovation performance, R&D investment and product and process improvements
- Funding for STI implementation including Action Plans through annual budgetary process
- Continuation of a supportive fiscal environment for R&D investment as well as supports for higher education R&D, industry linkages with higher education researchers, commercialisation of research results, in-company R&D and start-up companies
- Progress towards Europe 2020 R&D target set out in National Reform Programme – 2.5% GNP (2.0% GDP) by 2020 – latest position 2012: 2.13 % GNP (1.72% GDP)

# Self-assessment

Driving economic change through smart specialisation/RIS3

Informal assessment - Ireland



# Summary and Next Steps



- NRPE, Ireland’s research and innovation smart specialisation strategy, and its implementation through the PAG, is the primary focus of our Research and Innovation system
- NRPE is an integral part of overall national economic policy enabled through the Medium Term Economic Strategy 2014-2020, Enterprise Strategy (Making it Happen) and Higher Education Strategy
- Implementation of the 14 Action Plans, systemic recommendations and framework of metrics by stakeholders, with oversight and monitoring by the PAG, is the mechanism for assessment of progress, review and revision and is ongoing
- As a result of NRPE the majority of competitively allocated STI funding is being increasingly aligned to priority areas and underpinning platform and enabling technologies
- Opportunities at interfaces of disciplines are being increasingly recognised and are reflected in introduction of joint calls, e.g. the programme on “Smart Agriculture” is the first joint call by Teagasc and SFI
- The strategy provides a framework and governance mechanism to further build on place-based specialisation through its implementation

# Questions for Peer Review discussions:



## 1. How can non-technological SMEs or enterprises in traditional sectors be further supported through the RIS3?

- Innovation in services and business processes is a priority area within the RIS3 for Ireland which encompasses both technological and non-technological aspects. This is a Priority Area in itself and also a horizontal enabler for many of the other Priority Areas.
- Many of the Priority Areas have potential for developing the more traditional Irish indigenous SME base e.g. the food sector, engineering sector, manufacturing sector
- The wider policy mix includes supports for SMEs. Diffusion and adaption of technologies and knowledge to promote entrepreneurship and the innovation capabilities of SMEs, is facilitated by the RDI policy mix and associated policy instruments.
- Action Plan for Priority Area - Innovation in Services and Business Processes aimed at addressing absence of deep multidisciplinary research involving collaboration between research groups
- Action Plan also to identify and address research gaps, promote multi-disciplinary education and research and link with data analytics, security and privacy

## Questions for Peer Review discussions:



- Q2. How can international collaboration be further encouraged in the context of smart specialisation?
  - RIS3 process examined global market and growth opportunities for Ireland
  - Track record of International engagement of research and innovation system :
    - FP7, ERA, SFI programmes, HEI collaborations, H2020 Strategy
  - Priority areas and action plans are not purely national agendas – include actively seeking to align research agendas to contribute to pan-European agendas, to avail of non-exchequer funding and to access international expertise and networks, sharing the costs and risks of performing research and leverage funding where it is appropriate to do so.



## Questions for Peer Review discussions:

- Q3. How can the involvement of entrepreneurs, higher education institutions, users and civil society be further strengthened in the ongoing implementation of the smart specialisation strategy?
  - RIS3 process involved substantial engagement with stakeholders – Steering Group and Working Groups
  - Implementation group – Prioritisation Action Group - stakeholder consultations
  - Initial Action Plans for each Area developed with stakeholder consultation
  - Action Plans living documents open to further development and revision



## Questions for Peer Review discussions:

- Q4. How can demand-side policies such as public procurement and public sector innovation support the smart specialisation areas?
  - Action Plans for Priority Areas address research needs, infrastructure needs, skills, regulatory environment and technology transfer where relevant – enabling improvement in demand side conditions
  - Other initiatives being developed aimed at improving demand side conditions, incl.
    - new Advisory Group for Innovation in Services and Business Processes includes examination of public services,
    - Health Innovation Hub,
    - pilot SBIR scheme (Action Plan for Jobs 2014)

## Questions for Peer Review discussions:



- Q.5 How can policy learning from RIS3 implementation be optimised in the further implementation of RIS3?
  - RIS3 Monitoring Framework includes targets at National Level, Agency Level and Priority Area as well as monitoring indicators
  - Prioritisation Action Group overseeing RIS3 implementation, assessing implementation of Action Plans and performance
  - First report on Action Plans and Monitoring to be published shortly
  - First external review of RIS3 to be initiated 3Q 2014