



# Funding Sources

# ITI Energy's Role

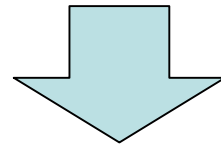
**“All Energy Conference”**  
**May 25, 2005**

**Nial McCollam, Director Technology & Markets**



# Presentation Purpose

- **Who we are**
- **Our role**
- **How we operate**



**Seed thinking on how we might work  
with you to bring forward exciting new  
energy technologies**



# ITI Scotland

- One legal entity, ITI Scotland, a company limited by guarantee
- 3 operating groups: ITI Energy, ITI Life Sciences and ITI Techmedia
- 10 year funding commitment from Scottish Executive, disbursed through/under agreement with Scottish Enterprise
- Each ITI operating group has funding of £150MM available (£15MM/year) for R&D investments



# ITI Energy

- Team of 16
- All from the private sector
- Strong energy industry experience
- Functional areas:
  - Technology & Markets
  - Intellectual Asset Management
  - Marketing and Communications
  - Commercialisation



# ITI Energy mission

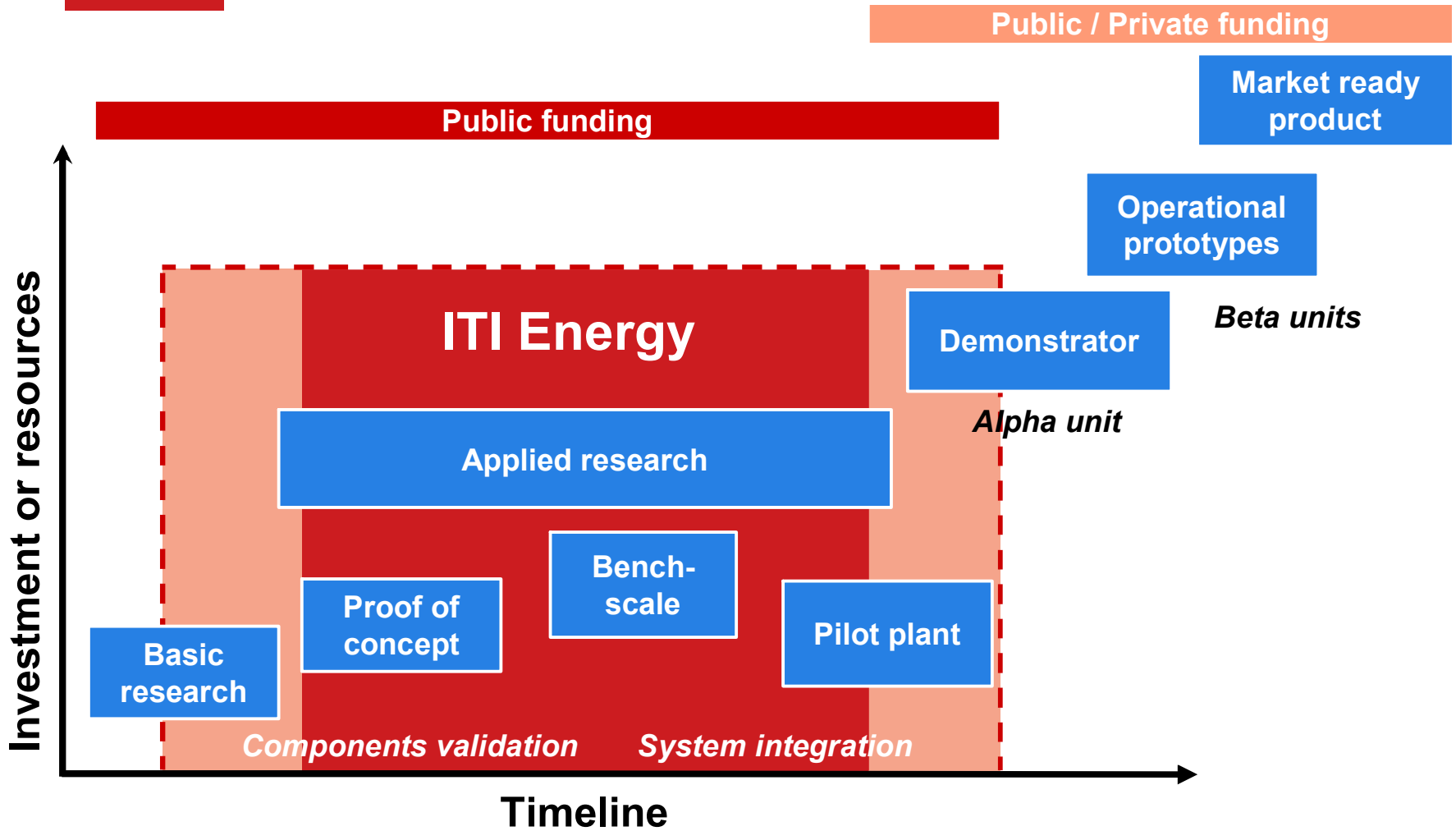
**Our mission is to identify, develop and successfully commercialise new, energy and energy-related technologies.**



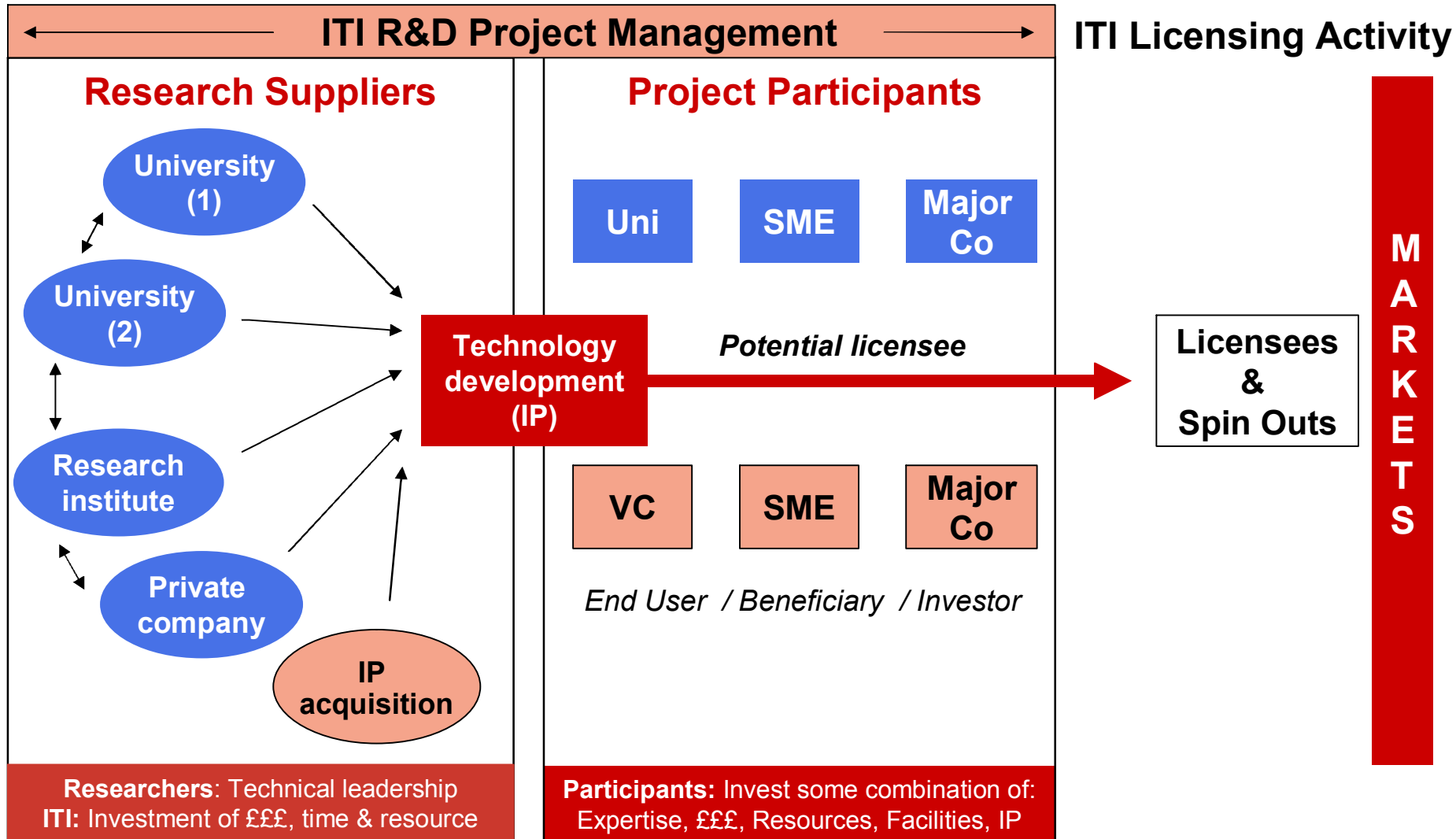
# Our key activities

- Identify future energy sector technology opportunities driven by global market needs
- Commission and contract new research
- Develop and manage these activities as collaborative projects
- Secure and protect intellectual property (IP)
- Commercialise through spin-outs and/or licenses to existing SMEs or larger companies
- Provide information, services and opportunities that have value to our members

# Investment “Sweet Spot”



# R&D Project structure (illustrative)





# Our R&D investment profile

- Projects between £0.5m and £5m
- Durations of 18 - 36 months
- Commissioning 4 - 6 new projects annually
- Rolling programme of 8 - 15 'live' projects at any one time
- Looking for game-changing technologies therefore some may take 3 - 7 years to achieve full commercialisation
- Aiming for a balanced portfolio - balanced in terms of risk, size, scale and timing of potential returns.



# What we look for in an investment

- Market scale
- Technology opportunity
- Competitive advantage
- Defensible IP
- Quality research providers / partners
- People who can deliver



# The “Sales Pitch”

..... or why you might want to work with us

- Scale of investment
- Commercial focus
- IP and licensing capability “built in”
- Ability to shape the “deal” to fit the needs of both our partners and the market requirements
- Leverage our capabilities, for example:
  - Internal resources and experience, AND
  - External networks



# Funding approach

- Active investor in R&D (not grant maker)
  - Focus our funding on two objectives
    - Scottish economic benefit
    - Financial return on investment
- } **Key is strength of IP created**
- Normal commercial approach to valuing and negotiating background IP, driven by:
    - IP status - strength of existing protection
    - Strength and uniqueness of IP relative to others
    - Scale and achievability of potential markets



# IP approach

- Look for IP opportunities with breadth of applicability
- Protect through combination of usual mechanisms (patents, registered designs, copyrights etc..)
- Maximises opportunity (for ITI and partners) to share in commercial value through spin-outs and or licensing
- Ideal is for ITI and partners to control licensing:
  - Application-by-application
  - Territory-by-territory



# ITI Energy focus

- **ITI are currently focused on technologies to:**
  - Drive down the cost of energy from wind (particularly offshore), wave and tidal
  - Squeeze more from mature oil and gas assets
  - Improve reliability and cost effectiveness of wide-spread power distribution including advanced power storage technologies
  - Distributed, mobile and portable power
- **And a range of key enabling technologies, including:**
  - Materials
  - Power conversion / management
  - Electrochemical systems
  - Condition monitoring systems & advanced controls
- **In the near term we will begin to explore the following:**
  - Bio-energy / bio-fuel opportunities
  - Solar power and photovoltaic developments



# ITI Energy R&D investments

- **£4 million to develop new low-cost, high-energy rechargeable battery targeted at portable applications and electric vehicles**
  - St Andrews University and QinetiQ
- **£1.2 million to develop an advanced battery management and power control system for electric vehicles**
  - MPower Solutions, Axeon Ltd, & St Andrews University
- **£1 million to investigate the production of a low-cost, solid hydrogen storage nano-material**
  - University of Strathclyde and Alterg SA