




## Contribution of the Engineering Institutions to growth of the economy

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### Before the ICE.....

- Prior to 18<sup>th</sup> Century, engineers were almost exclusively military men
- Civil Engineering was not an identifiable profession
- Smeatonian Society of Civil Engineers formed in 1771 – mainly dinner discussions
- Restricted membership and too informal to meet the needs of a fast growing profession

## Creation of the ICE.....

- Formed in a London coffee house in 1818 by a group of idealistic young men
- Professional element distinguished it from other societies
- Thomas Telford (leading engineer in the British Empire) invited as President in 1820
- Royal Charter in 1828
- Objective then as now 'fostering and promoting the art and science of Civil Engineering'

## Creation of the BSi

- Sir John Wolfe-Barry (Tower Bridge) persuaded ICE Council in January 1901 to form a committee to consider standardising iron and steel sections
- First meeting of the Engineering Standards Committee took place in April 2001. Resulted in reduction of sizes of structural steel sections from 175 to 113
- In 1903, the need to indicate that goods were 'up to standard' led to creation of British Standard Mark (now Kitemark). Reduced number of tramway rail gauges from 75 to 5

## Current contribution of ICE

- Qualifying body
- Centre for the exchange of specialist knowledge
- Conserver of engineering information
- Clearing house for provision of civil engineering expertise and policy
- Provider of resources to encourage innovation and excellence in the profession worldwide
- 80,000 members worldwide, 25% outside the UK

## Qualifying body

- Accredit degree (etc) qualifications
- Sets and applies standards for membership
- Works with other PIs to set and apply standards for CEng
- Sets and applies disciplinary processes
- Sets requirements for CPD
  
- Provides a globally consistent 'minimum standard' for various grades of membership

## Exchange of specialist knowledge

- Is and acts as a Learned Society
- Framework of permanent Expert Panels and temporary Lived Panels
- Conferences, debates, lectures, etc on topical issues relating to both Civil Engineering and the role of Civil Engineers in a changing world
- London base, but vibrant network of regional groups throughout UK and in many other parts of the world
- Peer reviewed publications, training materials and training courses

## Conserver of engineering info

- Archive of >130k volumes from foundation to present day, most available in e-form
- Includes detailed information on design and construction of many/most UK major public works, plus overseas

## Policy

- Impartial, independent and expert advice and opinion
- Definitely not a trade association or lobby group
- Standard and consistent governance
- Addresses full range of issues eg technical, commercial, process, etc
- Covers both proactive (eg State of Nation reports, manifesto and budget suggestions) and reactive (eg responses to government consultations) issues

## Resources for innovation and excellence

- Internal R&D fund to identify and provide support for individual proposals for research especially where such support will act as a catalyst in encouraging further funding from other sources
- Provider of impartial, independent, expert advice to research funding councils
- Provider of location and 'imprimatur' to showcase developments in theory, practice and process of Civil Engineering

## Summary

- Provides and administers standards for Civil Engineers and Civil Engineering
- Provides means of upskilling
- Provides a means for obtaining impartial, independent, expert advice (works increasingly with other PIs and the RAEng)
- Stimulates innovation
- Reduces risk
- Facilitates investment in the nation's infrastructure