

Promoting Science-based regulation in Europe - Challenges and opportunities

- Challenges for the Chemical Sciences
- Science for political decision-making
- Poor quality regulatory output
- Science-based decision-making



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Top-Ten Challenges for the Chemical Sciences

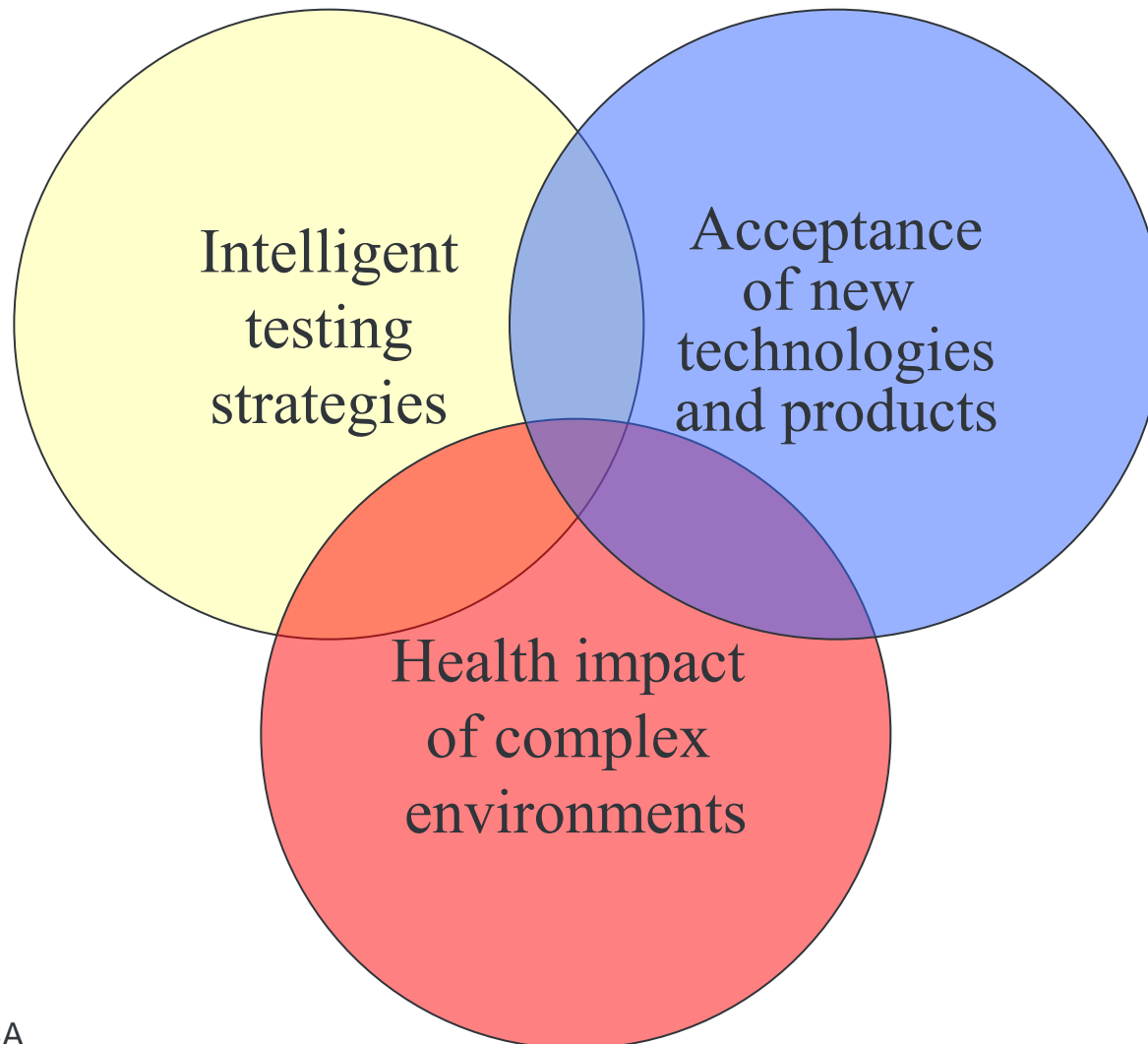


- **Agricultural productivity**
- **Conservation of scarce natural resources**
- **Conversion of biomass feedstocks**
- **Diagnostics for human health**
- **Drugs & therapies**
- **Drinking water quality**
- **Energy conversion and storage**
- **Nuclear energy**
- **Solar energy**
- **Sustainable product design**



Science for Political Decision-Making: LRI

Long Range Research Initiative/Strategic Research



Poor Quality Regulatory Output due to



- **decisions based on hypothetical hazards, rather than a complete and realistic understanding of risks;**
- **greater emphasis by policy makers on risk aversion, instead of risk acceptance;**
- **government action justified on the basis of public concern, poor science, controversy, and other non-scientific criteria;**
- **unjustified use of ‘precaution’ as a formal decision-making tool and risk management philosophy, leading to decisions based on ideology and politics;**
- **inadequate consultation with affected parties;**
- **incomplete or inadequate understanding of the impacts of regulatory decisions (including benefits and costs);**
- **politicisation of technical, implementing decisions.**

Science-Based Decision-Making



- **Use a variety of scientific sources and experts from many disciplines (and cultures);**
- **Distinguish between science and values;**
- **Address benefits and risks in case of significant scientific uncertainty;**
- **In political conflicts related to technologies involving conflicting values, have interested stakeholders find common ground;**
- **Conduct science-based risk assessment (management, communication)**
- **Look for consistent methodology**