



Technology  
Assessment in  
Social  
Context

# TASC

‘TASC’ is an ARC-funded project that is developing a framework for Technology Assessment in Social Context.





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# TASC Team

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# Technology Assessment

an applied process of systematically assessing the environmental, social and economic impacts of technological developments,

in order to use this information to influence policy at all levels.



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# Why TASC?

- Traditionally, TA has been inadequate in considering ‘the social’.
- Technology is inseparable from its social setting.
- A form of TA that considers technology in its social context is needed.

# The TASC logo



The logo reflects the formal, ‘hard-edged’ nature of a rigorous **Technology Assessment** process. TA and technology are embedded in and shaped by the **Social Context**, but in turn also shape it. The Social Context is informal, fluid and somewhat chaotic (unpredictable), and surrounds TA.



# The TASC Framework

A 'framework' is a structure for organising ideas, processes and approaches to give conceptual clarity and procedural guidance.

usual  
understanding

**Technology**



**Economic  
outcomes**

# The TASC Framework

TASC Values, Vision & Mission

TASC principles/  
philosophy/approach

TASC understanding  
of technology

TASC Process

TASC Methods

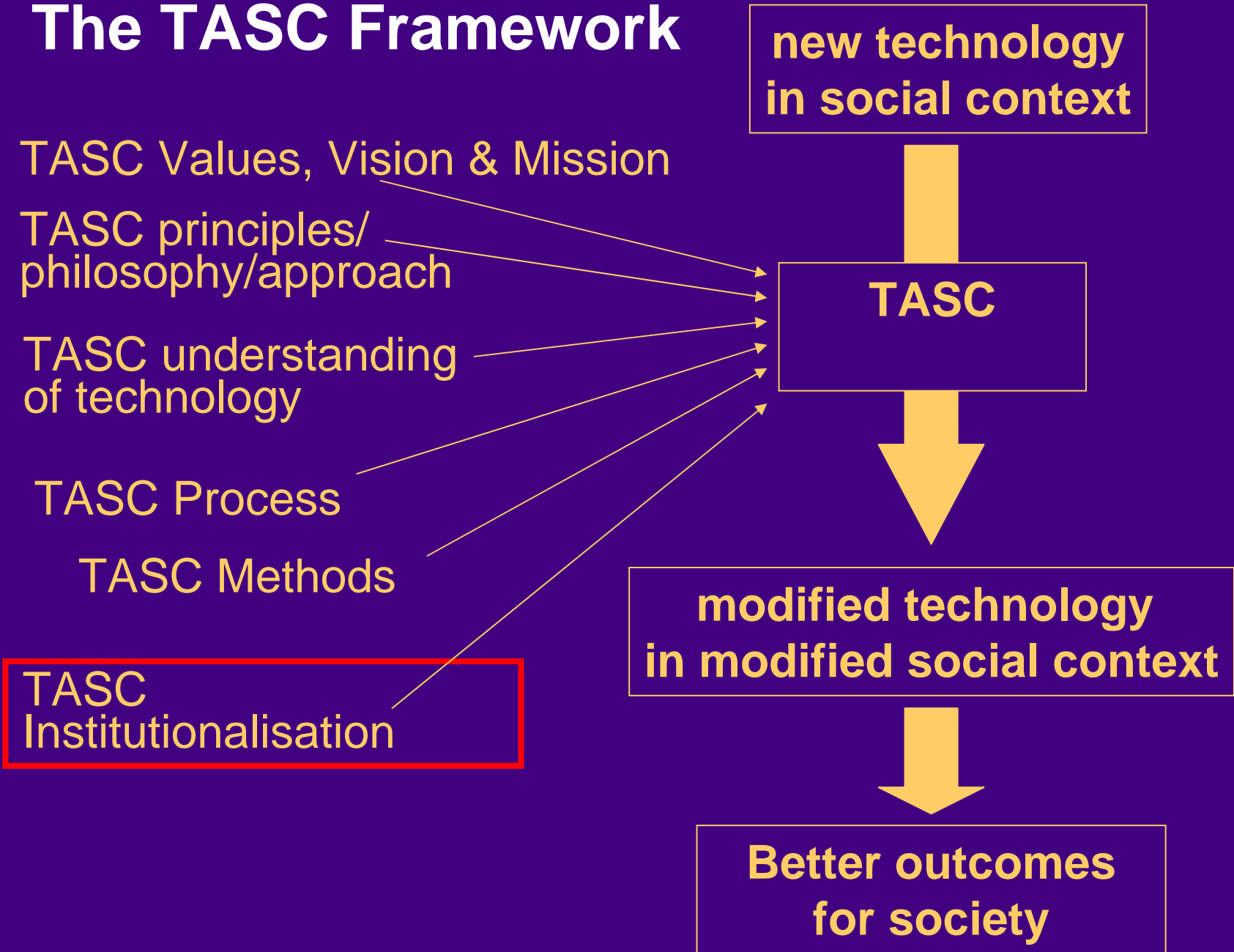
TASC  
Institutionalisation

new technology  
in social context

TASC

modified technology  
in modified social context

Better outcomes  
for society





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# TASC Values

- democratic process, rule of law, respect for human rights
- participation in decision making
- minimise harm and maximise benefit to society as a whole
- social, economic and environmental issues should be considered
- attention given to the distribution of costs & benefits
- society should drive technology, not vice-versa



# TASC Sustainability Principles

- Precautionary Principle
- Uncertainty Principle
- Intragenerational & Intergenerational Equity
- Recognition and Preservation of Diversity
- Internalisation of Costs
- Polluter Pays
- Prevention Principle
- Protection and Promotion of Health and Safety



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# TASC Vision

## TASC Vision for (Aust) society:

Australia has a better understanding of the social context of technology, manages technological development better, and this has led to improved outcomes for society.

## Vision for the TASC project:

The TASC team has played a role in institutionalising technology assessment as appropriate in Australia.



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# TASC Mission

TASC seeks to inform the **design, implementation, use, management and governance** of technological developments so that they contribute to **better outcomes** for society and the environment.



# TASC philosophy/approach

## TASC:

- takes a systems approach
- is constructive in shaping technological development in its social context
- is socially and politically aware
- is embedded in the social context
- is inclusive and participatory
- is dynamic, adaptive and iterative
- is historically-informed and future-looking
- is transdisciplinary



# TASC

## Understanding of Technology

- Technology is the product and process of the application of human ingenuity for a particular purpose;
- and the knowledge, designs, standards, procedures and applications associated with that creation;
- and the social arrangements specifically associated with that creation.



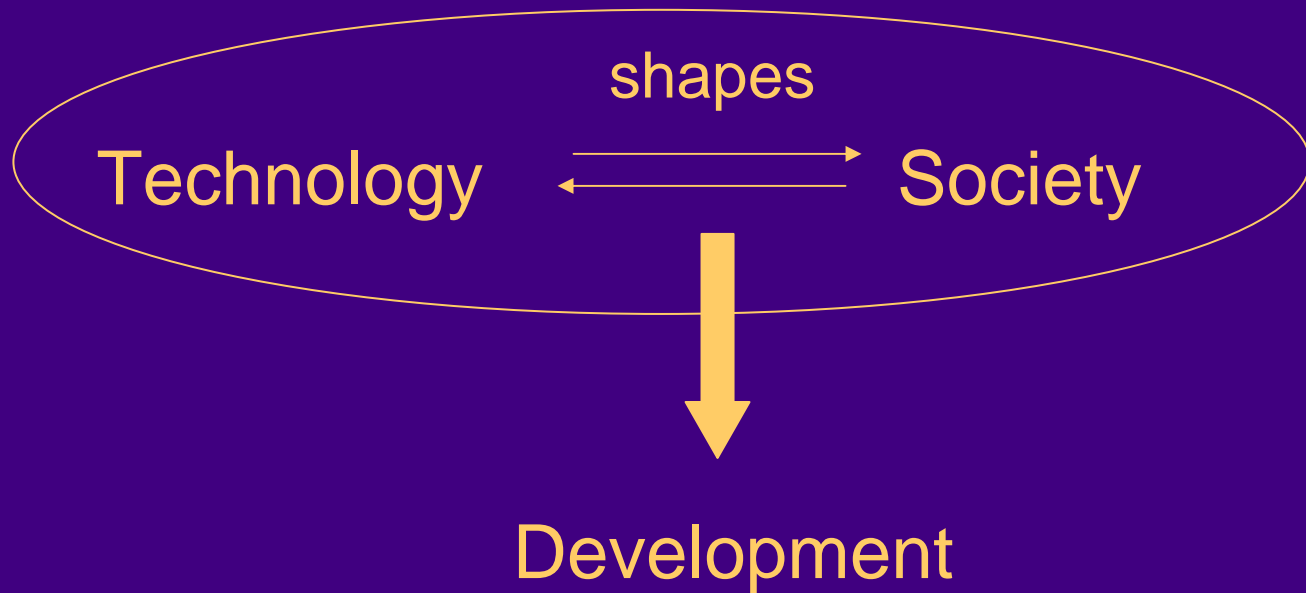
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Demonstrating what  
all this would mean .....

# Not the usual technocratic approach, ...

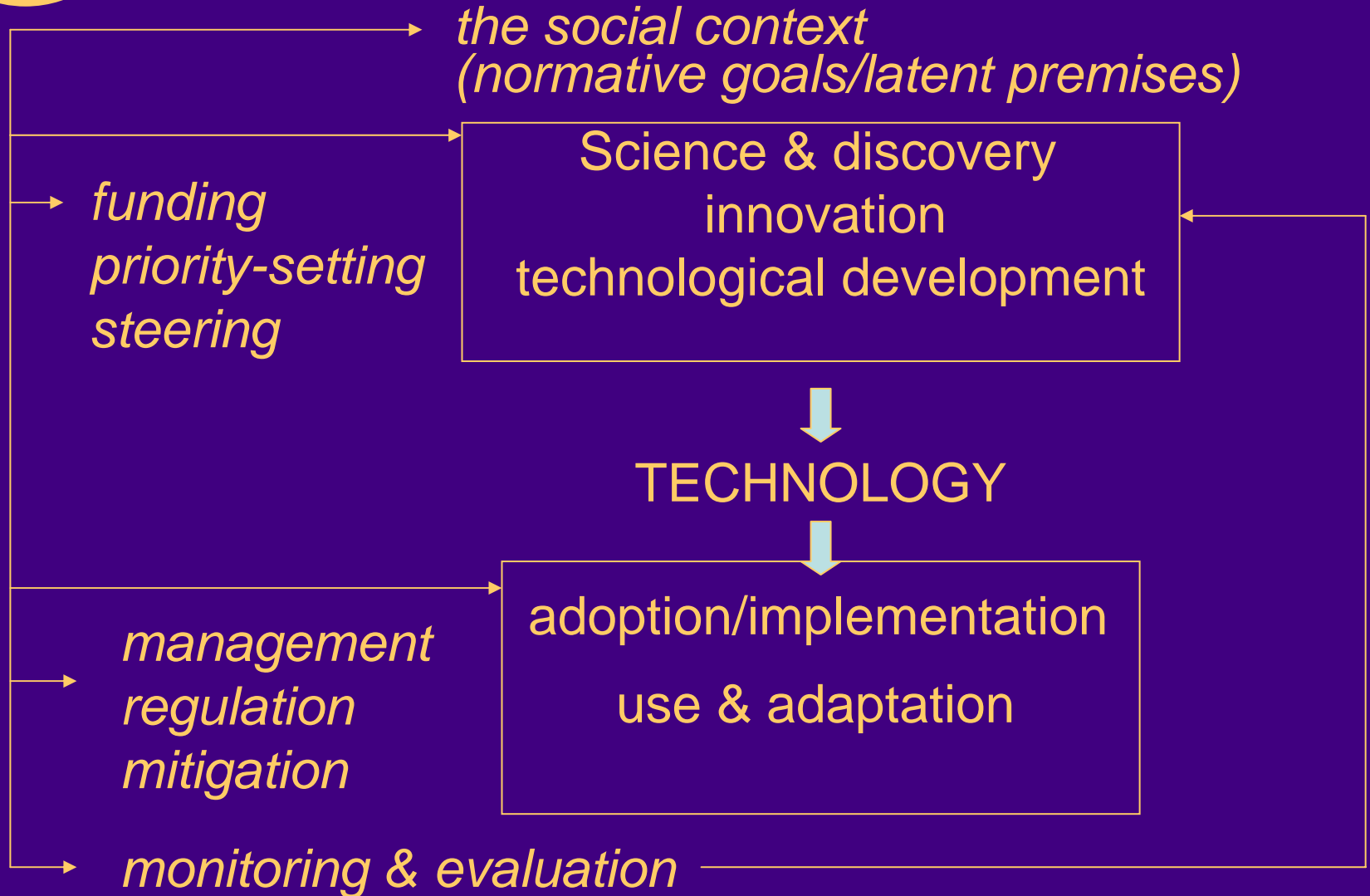


# Instead, a social systems approach ...





# ... helps shape technology development and governance





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# TASC methods

TASC provides procedural guidance, drawing on a toolbox of approaches and methods developed by the TA community throughout its history.

TASC will also evolve its own methods.



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# TASC Process

1. Scouting
2. Screening
3. Scoping
4. Assessment
5. Communication & participation
6. Evaluation



# 1. Scouting

Monitoring technological developments

(What are emerging important issues/topics?)

– NZ Navigator network



## 2. Screening

### Selecting topics for assessment

- Prioritisation
- Selection criteria
  - high potential impact (magnitude & distribution)
  - uncertainty about outcomes
  - major investment, major importance, benefits
  - widespread adoption
  - community concern
- Who decides?

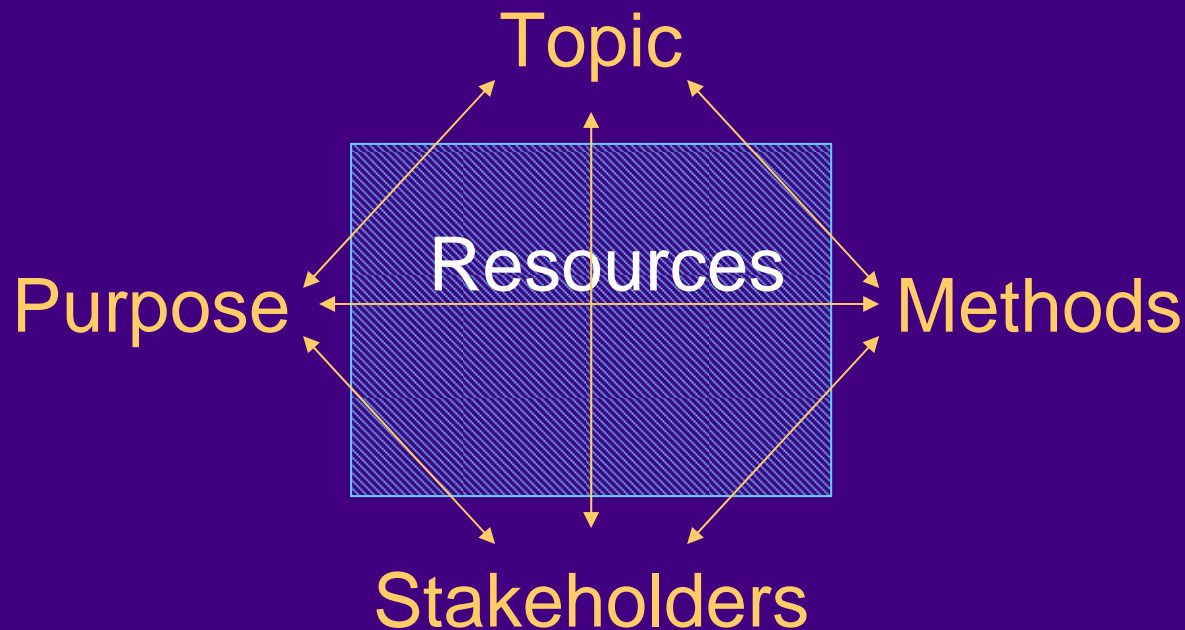


## 3. Scoping

Preliminary assessment to frame the topic, purpose, methods, stakeholders & resources

# 3. Scoping (cont)

Preliminary assessment to frame the topic, purpose, methods, stakeholders & resources



- Issues, perspectives, interests, questions



## 4. Assessment

- Assessing the potential social consequences

### Approaches

- Expert TA (classical, OTA)
- Participatory TA
- Constructive TA (and variants)
- A TASC Approach



## 5. Communication & participation

- Facilitating multi-way communication between all stakeholders
- TASC communicates with clients and audiences
- Integral part of TASC
  - Assessment
  - Interaction
  - Shaping of technology and context
  - Informing decision making



## 6. Evaluation

- Reflection on process, methods, content and outcomes (ongoing learning)
- Feedback into
  - The process of assessment
  - The process of technology development
  - The development of TASC
  - The field of Technology Assessment



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# Institutionalisation

For TASC to be effective, it needs to be embedded in an appropriate social, political and institutional context.

Needs to connect with key stakeholders:

- Political decision-makers
- Regulatory bodies
- Corporations & NGOs
- Technology developers
- Scientific disciplines and organisations
- Diverse publics

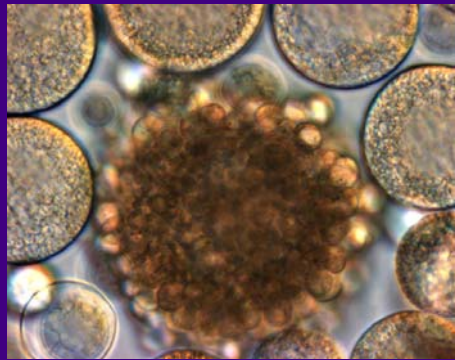


# Different models

- Parliamentary (informing parliamentarians)
- Government (informing government policy)
- Independent statutory authority
- NGO
- Academic (University)
- Industry
- Consultants (out-sourced)



# CSIRO Food Futures Flagship Omega-3 Project



marine micro-algae,  
the primary source of  
long-chain omega-3



genes for synthesis  
of omega-3 inserted  
into oilseed crops



oil incorporated  
into livestock &  
fish farm feeds



oil used in food  
products



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