



# Transforming research into innovation: Essential ingredients for success

Ian Jenson

# Ingredients for successful innovation

**1. Innovation**

**2. Innovation  
systems**

**3. Applying  
innovation systems**

Innovation systems for success

# 1. Innovation

Australia is not good at innovation

# 1. Innovation – research input



The Times [London] 28 April 2014

More research does not mean more innovation

# 1. Innovation – research to innovation

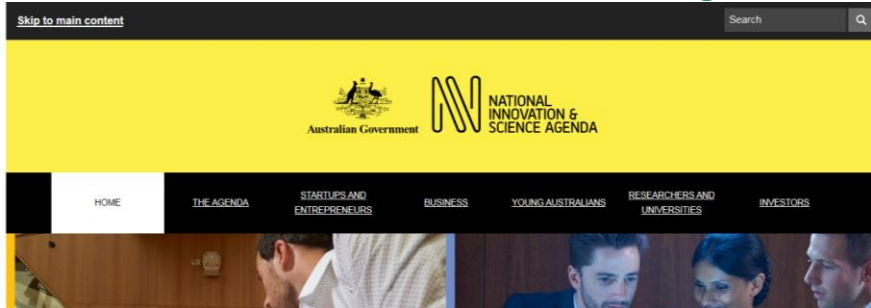


## Distribution of KPIs

	1 <sup>st</sup> quartile	2 <sup>nd</sup> quartile	3 <sup>rd</sup> and 4 <sup>th</sup> quartile
Knowledge creation	2	5	
Knowledge transfer	1	2	2
Knowledge application	1	1	3

Poor record in converting science into innovation

# 1. Innovation – policy



Welcome to the ARC Industrial Transformation Training Centre for Innovative Horticultural Products

Australian government innovation policy

# 1. Innovation

Research isn't enough - we need other ingredients

## 2. Innovation systems

Innovation systems provide an approach to understanding how innovation occurs



# 2. Innovation systems accepted

Actor competence  
Institutions  
Infrastructure  
Interactions  
Markets



Entrepreneurial experimentation  
Knowledge development  
Knowledge dissemination  
Direction of the search  
Market formation  
Resources  
Acceptance

Conceptual framework  
'describe, understand, explain -  
and perhaps influence -  
processes of innovation'  
(Edquist, 2005)

New products,  
New processes,  
New supply chains  
New organisational  
models for business

Innovation systems are a well-accepted approach

# 2. Innovation systems applied to projects

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## Testing innovation systems theory using Qualitative Comparative Analysis<sup>☆</sup>

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## The root cause of innovation system problems: Formative measures and causal configurations<sup>☆</sup>

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## Innovation system problems: Causal configurations of innovation failure<sup>☆</sup>

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Innovation systems can be applied at the project level

## 2. Innovation systems predict

- Both the structural and functional theories predict innovation system performance
- All the elements of the innovation system are required for innovation to occur
- A limited number of innovation system elements in this system were repeatedly weak
- Taken alone, weakness in these elements lead to significantly increased risk of lack of an innovation outcome

Innovation systems failure frameworks predict project  
innovation outcome

## 2. Innovation systems

Innovation system failure frameworks provide a prediction of innovation outcome from projects

Innovation systems can be applied at the project level

# 3. Applying innovation systems

Innovation systems can be applied to improve innovation management

# 3. Application – thinking tool

Structural

Actor  
competence  
Institutions  
Infrastructure  
Interactions  
Markets

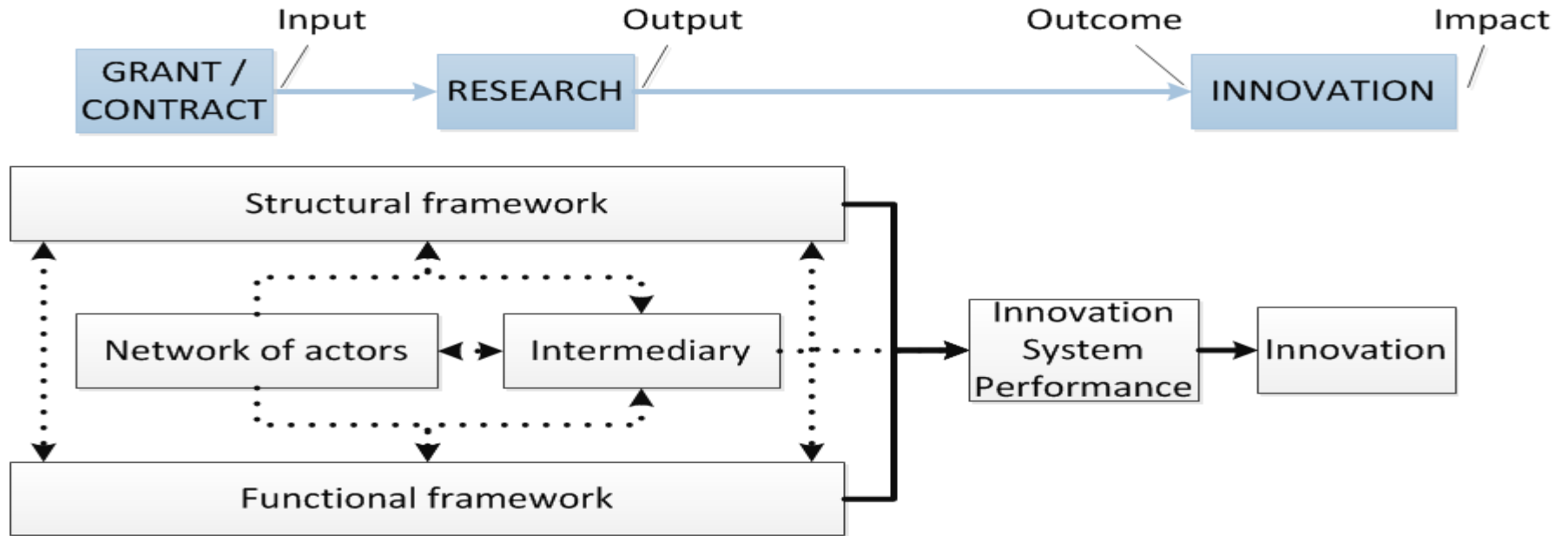


Functional

Entrepreneurial  
experimentation  
Knowledge  
development  
Knowledge  
dissemination  
Direction of the search  
Market formation  
Resources  
Acceptance

Incorporate innovation systems thinking

# 3. Application – planning tool



Innovation systems to plan for success

# 3. Application – research tool

- Does the innovation system framework instrument work across sectors and technologies?
- Case control studies to demonstrate effectiveness as a tool
- Failure framework as an analytical tool – deeper insights
- Failure framework as a management tool
- Failure framework as a tool for evaluation



# 3. Applying innovation systems

Innovation systems can be applied to improve innovation management

# Innovation systems: ingredients for success

## Innovation

Research isn't enough - we need other ingredients

## Innovation systems

Failure frameworks predict innovation outcome of projects

## Applying innovation systems

Innovation systems can be applied to improve innovation management

Innovation systems : ingredient for success