



RHODES UNIVERSITY  
*Where leaders learn*

Prof Eureka Rosenberg

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**We want a green economy and society – but are we still ‘green’ about skills?**

**What research tells us about producing green skills.**

**green skills**  
Building capacity for a sustainable future

Biodiversity Research and  
Evidence Indaba 17 August  
2017

# “Green Economy Learning Assessment for South Africa”

Contract research conducted as part of the Green Skills National System Building Programme (funded by the Green Fund).

Report available on:

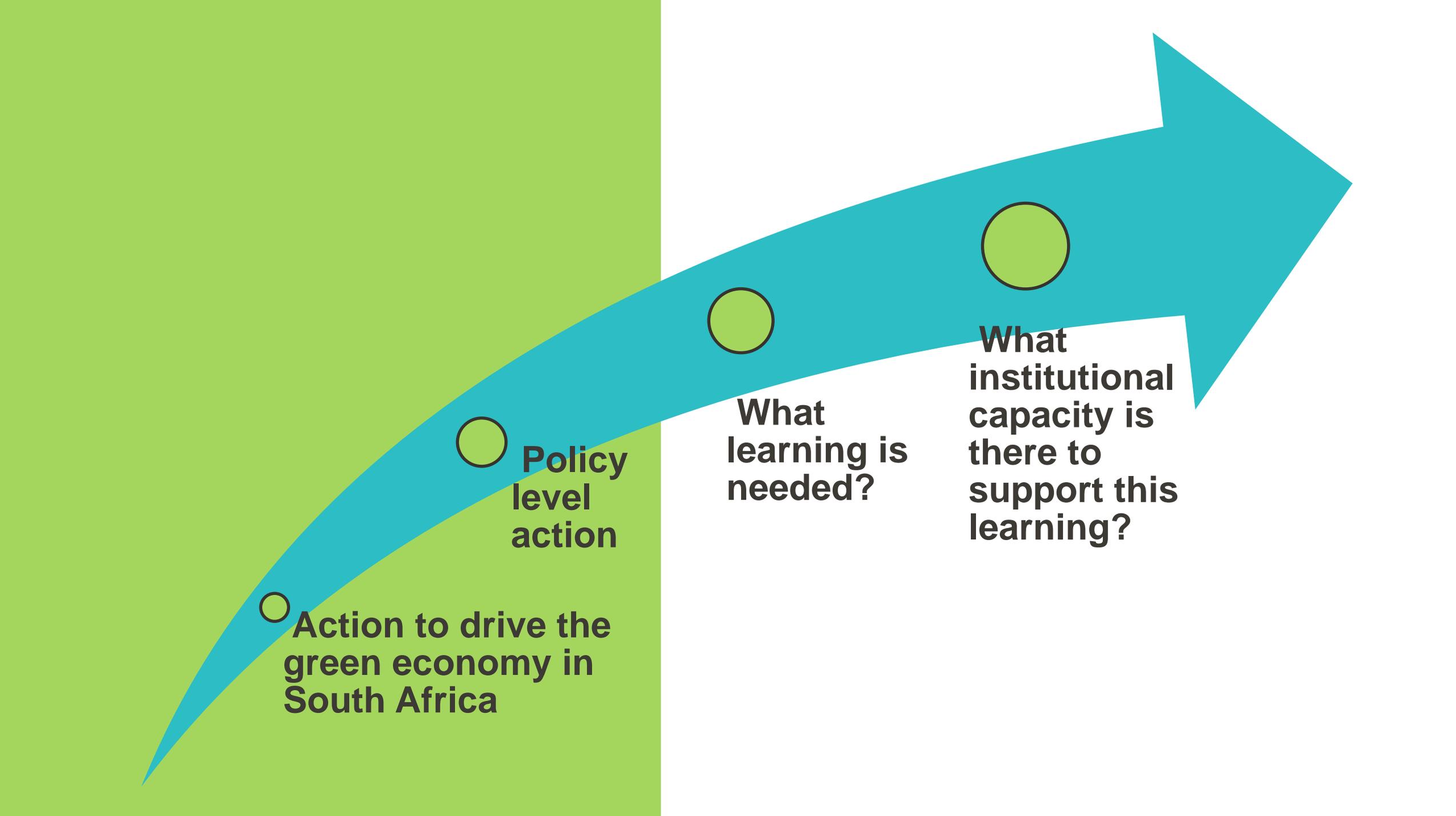
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## Analysis of the Green Economy Learning Assessment for South Africa

Conducted by Eureta Rosenberg, Garry Rosenberg and Nina Rivers, with input from Heila Lotz-Sisitka and Presha Ramasarup, 2016





**Action to drive the green economy in South Africa**

**Policy level action**

**What learning is needed?**

**What institutional capacity is there to support this learning?**

# Research Methods

**1. To determine the focus and scope of the assessment**



**Policy Review,  
Survey 1 & Task Team  
Consultation**

**Survey 2**



**2. Online  
questionnaire to  
96, on learning  
needs and  
providers**

**3. Desktop and interview  
based: REIPPPP, Working for  
Water EPWP, Sustainable  
Transport in City of Joburg,  
City of Cape Town**



**3 Case Studies**

**4. 12 interviews  
with Champions  
and Education  
Providers**

**5. Desk top 'audit' focused on  
courses that respond to identified  
needs; 174 database entries**



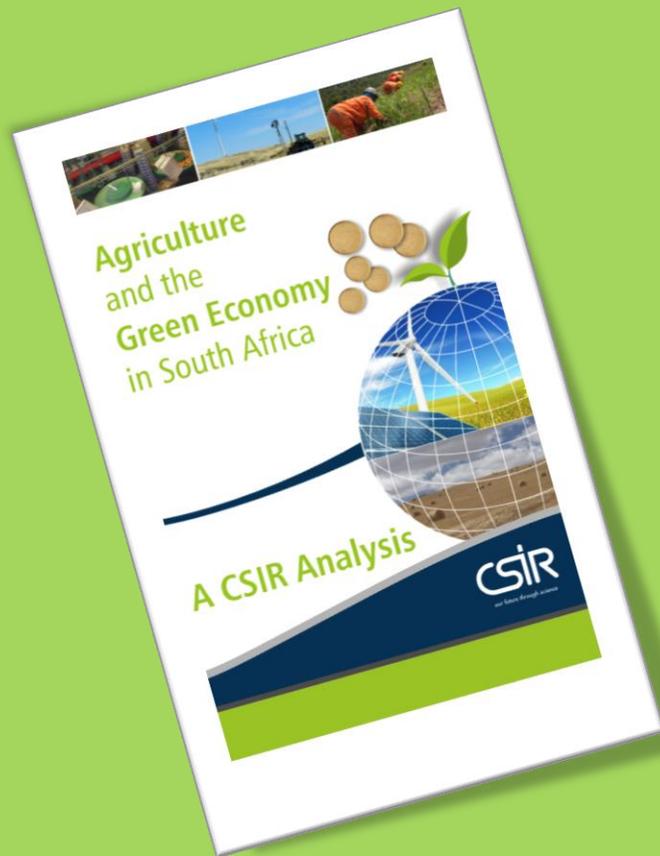
**Desk Top Provider Audit**

**12 Interviews**



# Policy Analysis

Helped with deciding the focus and scope of the assessment – where should the survey focus? Which sectors should be included in the survey?



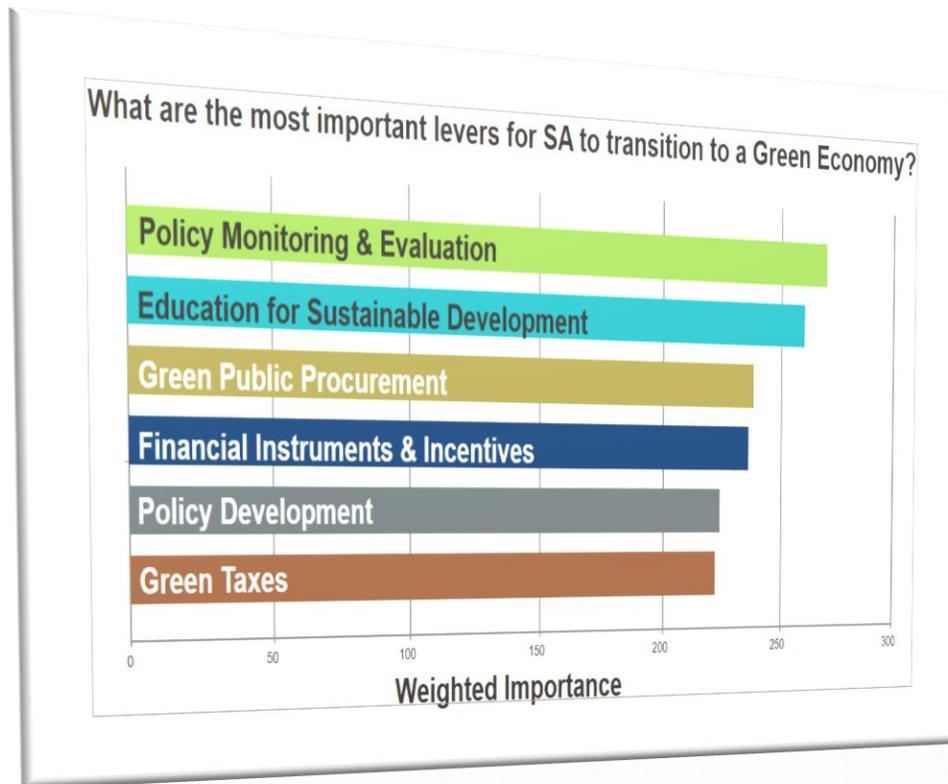
- There is a plethora of green economy or sustainability policies across sectors
- Even within one sector (e.g. Agriculture) there is more than one green economy or sustainability related policy
- Policies are comprehensive but not very specific
- There is a lack of alignment between policies





# Findings:

## Most important levers



## Most important sectors

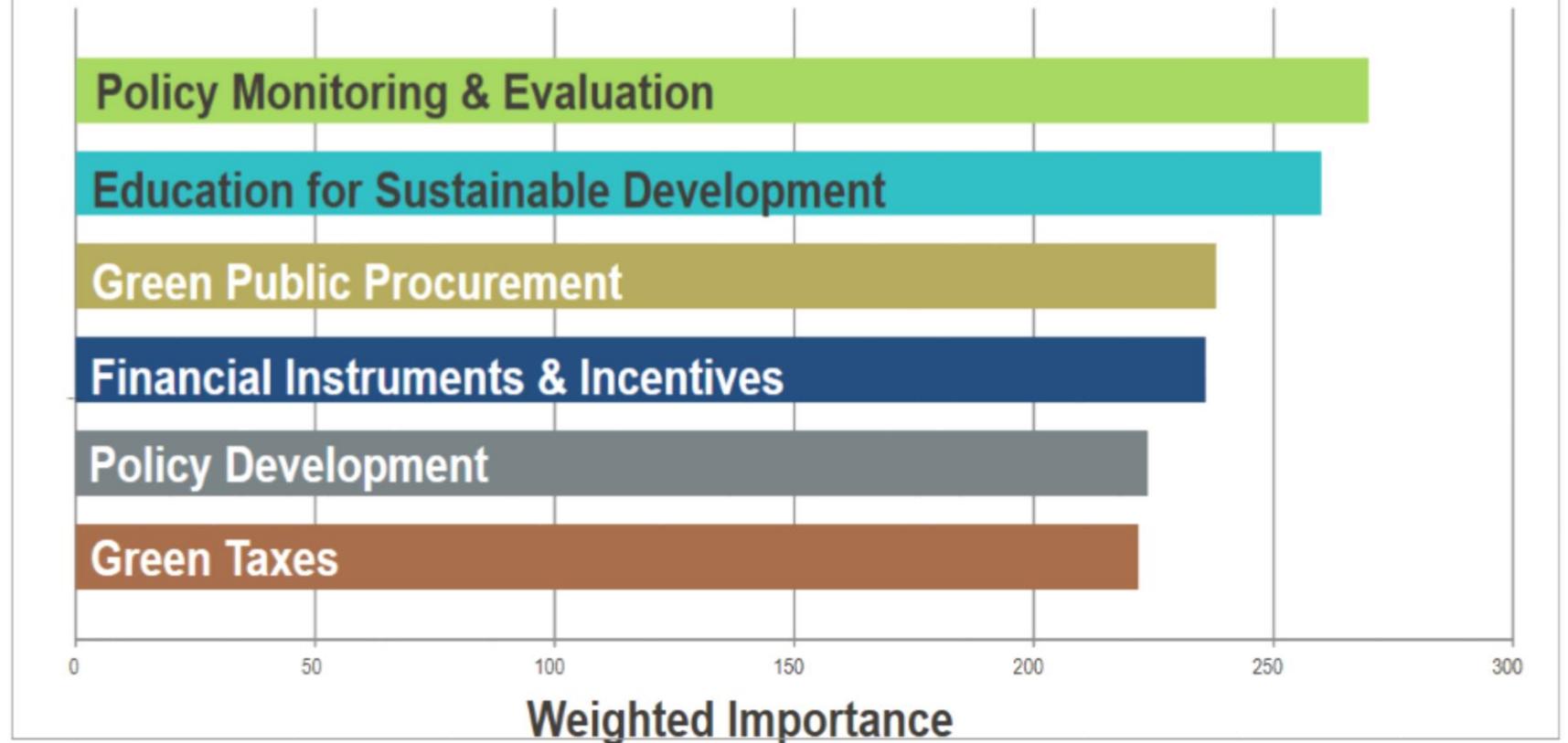
Focus Area/ Sector	Survey 1 Responses (20 in total)
Energy	100.00% (20)
Transport	70.00% (14)
Waste	60.00% (12)
Water	55.00% (11)
Agriculture	55.00% (11)
Built Environment	55.00% (11)
Industry	50.00% (10)
Finance	35.00% (7)
Mining	20.00% (4)
Tourism	20.00% (4)
Fisheries	5.00% (1)
Forestry	5.00% (1)
Other (please specify)	15.00% (3) Public domain e.g. municipalities; Smart Cities

# Most Important Sectors for the Green Economy

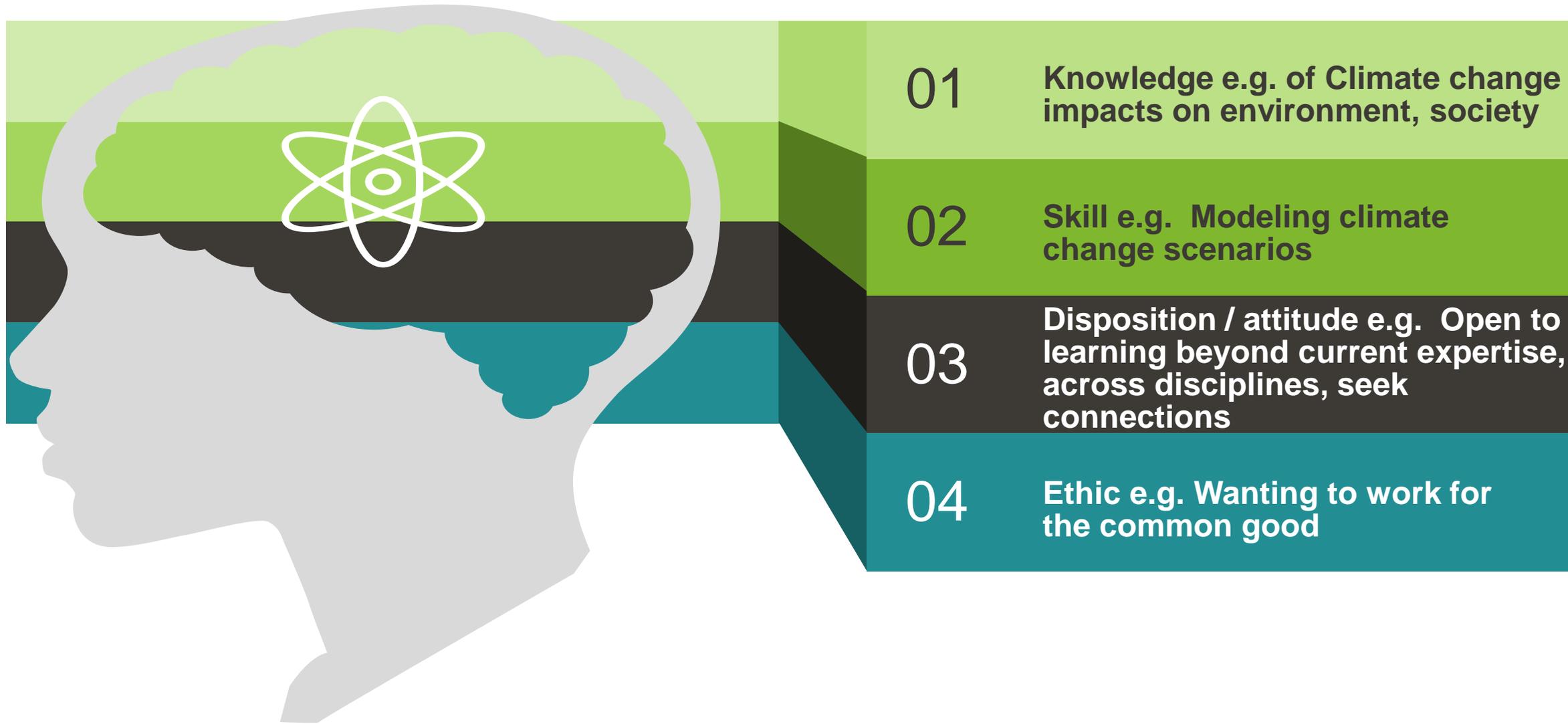
Focus Area/Sector	Survey 1 Responses (20 in total)
Energy	<b>100.00% (20)</b>
Transport	<b>70.00% (14)</b>
Waste	<b>60.00% (12)</b>
Water	<b>55.00% (11)</b>
Agriculture	<b>55.00% (11)</b>
Built Environment	<b>55.00% (11)</b>
Industry	<b>50.00% (10)</b>
Finance	<b>35.00% (7)</b>
Mining	<b>20.00% (4)</b>
Tourism	<b>20.00% (4)</b>
Fisheries	<b>5.00% (1)</b>
Forestry	<b>5.00% (1)</b>
Other (please specify)	<b>15.00% (3) Public domain e.g. municipalities; Smart Cities</b>

- Online questionnaire to 69; 20% return rate.
- Example of findings – rankings given weighted importance
- Helped to identify where ‘green economy action’ happens and who should be included in the case studies and further survey

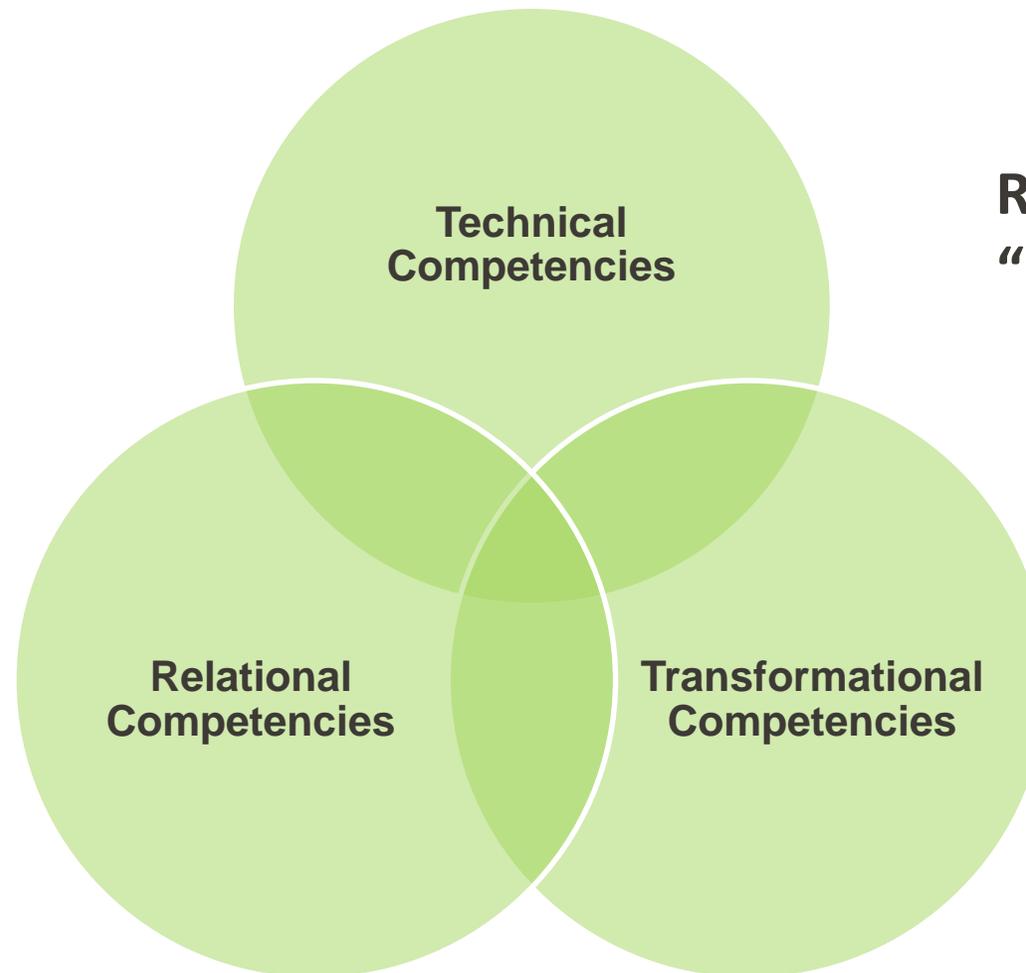
What are the most important levers for SA to transition to a Green Economy?



# The concept of 'competence'



# Competency framework for learning assessment:



**Ref: Otto Scharmer, MIT  
“Field-based Leadership  
Development”**

# Competency framework for learning assessment:

**Wiek, Withycombe and Redman, *Sust Sci*, 2011: Key competencies in sustainability: A reference framework for academic program development.**

- Inter-relational competency
- Systemic thinking competency
- Strategic competency
- Anticipatory competency
- Normative competency

# Findings: 5 Competency clusters identified



**1. Making the case for a green economy initiative or intervention**

**2. Integrated sustainable development (social, economic, ecological) planning, policy development and governance**

**3. Strategic adaptive management including review and evaluation**

**4. Coalition building and working effectively across different units within an organisation and across types of organisations and sectors**

**5. Expansive social learning and action across many different knowledge fields**

# Findings – Competencies required by Green Economy Champions:

## 1. Making the case for a green economy initiative or intervention

- **Sustainability** - understanding and valuing social, economic and ecological outcomes; knowing how to determine this value including its financial value and social benefit
- **Visioning** - Anticipatory and technical competence
- **Context responsiveness** –strategic competence
- **Working with policy** – technical, relational and transformative competence
- **Systems thinking and working with(in) complexity** - technical and normative competence
- **Modeling** – produce and use models - technical and anticipatory competence
- **Evaluation** – determine and show ecological and in particular social and financial impact and potential impact - technical and normative
- **Resource economics, business case development** – determining financial value of natural resources and their protection - technical
- **Working with qualitative and quantitative data** – technical competence
- **Setting up intelligent data gathering and data management systems** – to be able to show impact over time - technical competence
- **Communicate value to diverse stakeholders** - relational competence
- **Stakeholder engagement** to build partnerships, coalitions, shared values and ownership in the face of diverse values and mandates - relational competence

# Findings – Competencies required by Green Economy Champions:

## **2. *Integrated sustainable development (social, economic, ecological) planning, policy development and governance***

- **Sustainability** - understanding and valuing social, economic and ecological outcomes; integrate across these domains - Normative and technical competence
- **Visioning** -- Anticipatory and technical competence
- **Context analysis** and planning to match the context – strategic competence
- **Systems thinking and working with(in) complexity** - technical and normative

- **Developing and integrating with policy** - Knowledge of and ability to interpret and apply policies and regulatory frameworks; integrating green economy and natural resources in organisational mandates; policy innovation; policy integration; **mainstreaming natural resource management** to inform planning, decision making - Strategic and technical competence
- **Understanding and applying new economic thinking** e.g. circular economies and just transition frameworks
- **Modeling, forecasting and future scenario-ing** – produce and use models including climate impact analysis - technical and anticipatory
- **Resource economics** – technical competence
- **Evaluation that reflects social, economic and ecological value** – technical and normative competence
- **Stakeholder engagement to build partnerships, shared values and ownership** -relational competence
- **Supporting change in agencies and actors, supporting communities in the implementation of policy**
- **Project / programme management and leadership competence.**

# Findings – Competencies required by Green Economy Champions:

## 3. *Strategic adaptive management* including review and evaluation

- **Reflexivity** i.e. ability to recognise and reflect on outcomes of actions taken and adjust course and/or adjust initial starting assumptions
- **Strategic competence**, involving visioning, thinking laterally, seeing new connections and opportunities
- **Systems thinking** and working with(in) complexity
- **Decision making** and willingness to take risks in the face of uncertainty
- General **research and analysis** capacity
- Ability to design and implement complexity sensitive **monitoring and evaluation** - technical and relational competence
- **Working with data** - qualitative and quantitative data – technical competence
- **Setting up intelligent data gathering and data management systems** – technical competence
- Project / programme **management and leadership** competence
- Stakeholder engagement and communication skills

# Findings – Competencies required by Green Economy Champions:

## 4. *Coalition building and working effectively across different units within an organisation and across types of organisations and sectors*

- **Strategic competence**, involving visioning, thinking laterally, seeing new connections and opportunities
- **Systems thinking** and working with(in) complexity
- **Integrative thinking** – transformative competence
- **Communicative** relational competence
- **Stakeholder engagement** – relational competence
- Understanding and applying relevant **policy** frameworks in an integrated or aligned manner
- **Social learning**
- Ability to **advance collaborative practices**, facilitate solution finding despite conflicting values
- Project / programme **management and leadership** competence.

# Findings – Competencies required by Green Economy Champions:

## **5. *Expansive social learning and action across many different knowledge fields***

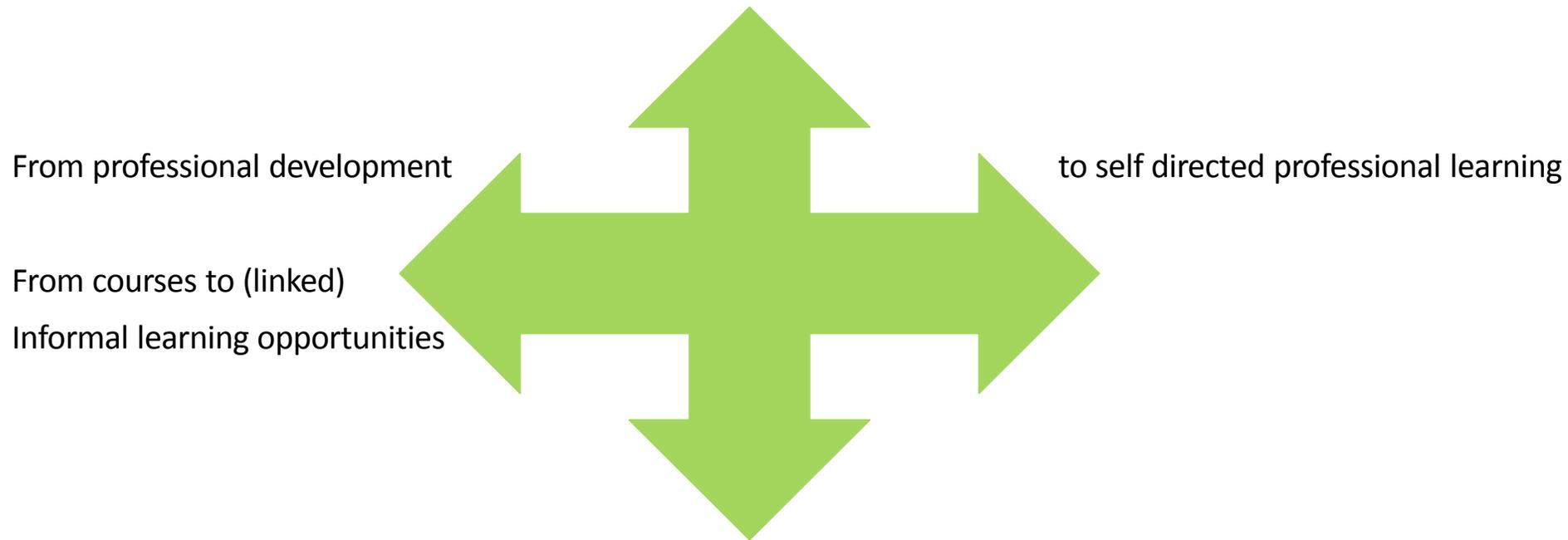
- **Systems thinking** and working with(in) complexity
- **Valuing** the contribution of **diverse disciplines** to solve sustainability issues and drive the green economy
- Able to **assemble and manage teams** with diverse disciplinary skills to solve sustainability issues and drive the green economy, practically, politically and conceptually
- Within individuals, **understanding, perspective and skills across disciplines.**
- Being comfortable with (using) qualitative and quantitative data
- Understanding and valuing **social learning**
- **Advance collaborative practices**, facilitate solution finding despite conflicting values
- Designing expansive / transformative and social learning programmes and facilitating social learning processes
- Designing learning opportunities that are appropriate for particular contexts

# Competencies exist in relation to others, in relation to the object and in an enabling context



## SUPPLY FINDINGS:

- All SA universities and a small number of other providers address green economy related learning needs - a database of 104 entries including 30 online courses
- Sustainability champions are self directed in their learning
- They value a spectrum of learning opportunities
- They seem to learn all the time: in long and short courses, individually and in groups, and 'on the job,'



# Tool for Teams to Determine Own Learning Needs:

		In relation to the tasks in the first column, and our competencies ...		
		What are the strengths in our team?	What are our competency gaps?	How can we improve our competency mix and levels?
<b>What are ...</b>				
<b>The technical tasks?</b>	<i>Hint: Use the tasks and competencies outlined in this assessment to guide you in completing these columns</i>			
<b>The people related tasks?</b>				
<b>The transformational task(s)? (What change do we want and why?)</b>				<i>Hint: Use information in this assessment to guide you in completing this column</i>

# Acknowledgements

**ILO (Najma Mohamed) and UNITAR (Amrei Horstbrink and Angus McKay)**

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**PAGE Task Team**

**All Interviewees and Survey Respondents**



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