



DESIGN TO INNOVATE WORKSHOP

Technical Standards, Guidelines
and Manuals used in the Road
Construction & Maintenance
Environment

31 October 2018
Aurecon, Tshwane



transport

Department:
Transport
REPUBLIC OF SOUTH AFRICA



aurecon

*bringing ideas
to life*

- **CAPSA 2019 Executive and Steering Committee meetings concerned** at the continued lack of investment and resources for the updating of industry technical guidelines and manuals and the cumbersome process to initiate the development of new ones.
- Requested Aurecon to conduct and facilitate a workshop with relevant stakeholders in the industry using the creative **Design to Innovate** process
- The **National Department of Transport Chief Directorate for Road Engineering Standards fully supportive** of the workshop and gave full participation.



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Participants

Name	Company	Title
Philip Hendricks	Aurecon	Client Director Transport (Africa)
Kobus van der Walt	SANRAL	Manager - SANRAL Technical Excellence Academy (TEA)
Brian Perrie	CCI	Managing Director: The Concrete Institute
Benoît Verhaeghe	CSIR	Competence Area Manager: Transport Infrastructure Engineering
Melanie Hofmeyer	WC Gov	Director: Road Design
Krishna Naidoo	SANRAL	Material & Pavement Specialist
Arthur Taute	SMEC	Regional Head and Transportation Section Manager
Msondezi Futshane	Department of Transport	Chief Director of Road Engineering Standards
Leslie Johnson	NDoT	Road Engineering Standards
Dr Rodney Milford	CIDB	Prog Man: Construction Industry Performance (CIP)
Ishmail Cassiem	CIDB	Manager: Construction Industry Performance
Basil Jonsson	SARF	Operations Director
Chris Rust	CSIR	
Wim van Schalkwyk	Aurecon	Design to Innovate Partner
Le Riche Lombard	Aurecon	Pavement Engineer



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WHAT WILL WE DO?

There was agreement on the agenda for the day, with specific request to focus on defining tangible solutions rather than spending too much time to discuss the problem.

Explore background and context of **current state**

Explore the **WHY?** of things

Explore the stakeholder **ecosystem**

Explore current **pain points**

Envision an **aspiration** of what might be possible

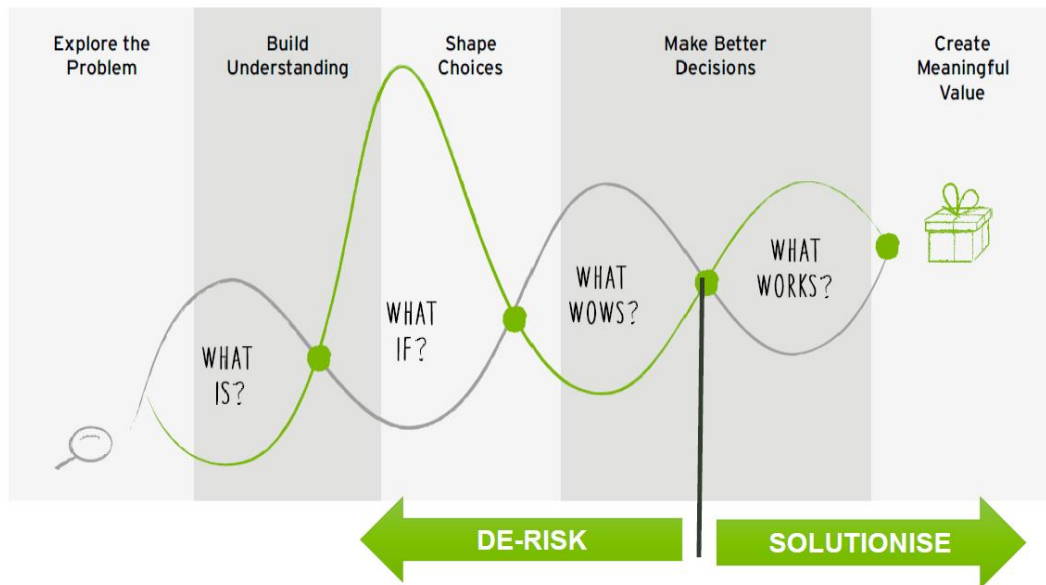
Shape **new options** and co-design possible solutions

Craft and activate a tangible **way forward**



DESIGN TO INNOVATE

A robust user-centric methodology to tackle difficult problems.



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WHY?

WHY do we consider this user-centric approach?



what users wanted

To avoid situations where money and time is wasted on solutions that do not meet end user needs.

the solution offered

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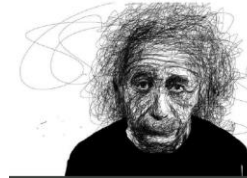
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Everyone was encouraged to use this opportunity to think differently about solving this challenge!

“We cannot solve our problems with the same thinking we used when we created them.”

- Albert Einstein



Unconventional



▶ ***Appointment of Experts*** – time period and process to get experts appointed

- Appointment of individuals not companies
- Appointment of individuals to draft TOR precludes them from downstream work
- Previously ok for SANRAL to appoint – current PFMA issues
- Through the SANRAL research panel?

▶ ***Availability of documentation***

- Copies of copies being made
- Time taken and process to get onto NDoT website
- Communication issues for SANRAL hosting some of the documentation and ensuring correct versions are available for download

▶ ***Time taken to get approval of documents*** – some has taken 9 years

- By the time document ratified it has already been revised e.g. TRH11, 3,21
- Constitutional issues – national versus provincial responsibilities and time taken to get majority approval
- Not only roads officials but also transport!





WHY?

The group discussed the various reasons why this is important. Why are we doing this? Why are there technical documents in the first place? Why is it important that we do this better?

BRAINSTORM

Exploring ideas together

How might we co-design a better model for developing, ratifying & sharing (& using) technical documentation?

Each table subsequently brainstormed ideas in answer to the How Might We question.



PAIN POINTS

3 THEMES

Development

Ratification

Sharing & Using



Development

USE
DEPT
MANUALS

MINIMIZE
TRAH
TRH

USE
INDUSTRY
MANUALS



Ratification

NEED
CO-ORD
COMMITTEES
-UNDER RCB

Sharing & Using

NEED
CO-ORD
WEBSITE
TO FIND REF

ADVERTISE



(CSIR) ?
PHOTO BY DET

From
short to
medium
term
solution



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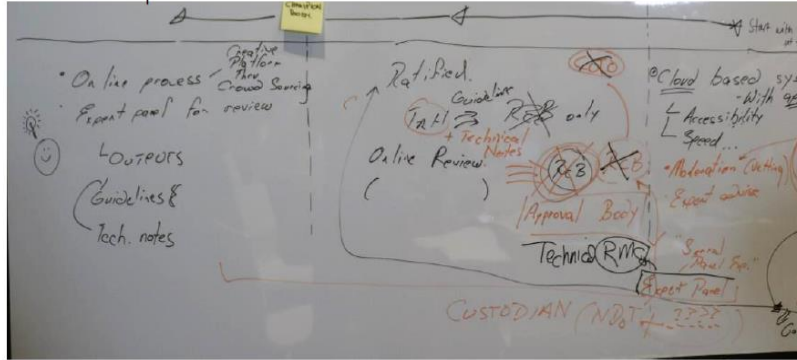
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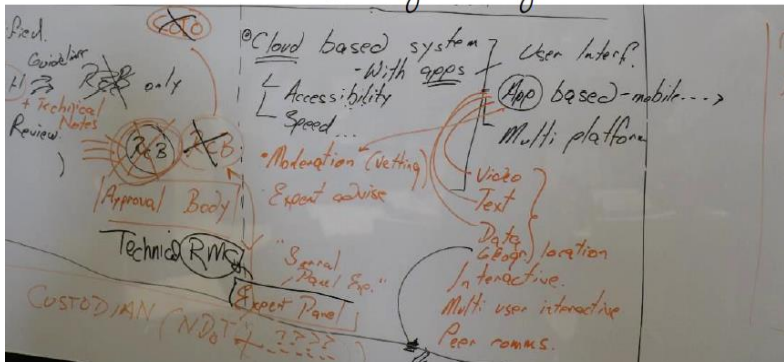
Group 1 Development

Ratification

To a possible long-term solution



Sharing & Using



NEXT

What?	Who?
Consolidate and share workshop outputs	Wim
Prepare concept presentation for RPF	Phil
Present at RPF and get resolution to continue with business case (and source industry volunteers for working committee)	Phil
Prepare business case / value proposition	Melanie (lead), Lesley, Chris / Benoit, Krishna / Kobus, Saied / Brian, consultancy volunteer from RPF
Further advocacy & sharing at various platforms	

Need approval of resolution.....



Aim to go live with solution by 2020!

