



Quick Brief

A news update from the NBI on its programmes, business leadership and issues on sustainable development.

28 August 2017

The Role of Business in a Circular Economy

The Circular Economy is not a synonym for recycling, upcycling or downcycling. It is designing an economy that decouples economic activity from the growing use of finite resources. It has the potential to create thousands of new jobs and business opportunities.

The NBI recently held a thought leadership dialogue calling on the experiences of Prof. Linda Godfrey, of the CSIR, who has conducted significant research into the topic, and Sherman Indhul, whose team has explored the opportunities that circular thinking presents for Transnet.

Circular thinking challenges conventional views about meeting economic needs: it explores sourcing – including mining waste, designing for reuse and recycling, meeting needs without individual ownership, using new and emerging technologies to offer better solutions and always focusing on minimising waste.

While effective waste management is essential, Prof. Godfrey says the emphasis has to move away from built-in obsolescence to keeping resources in play for much longer. Disposal should be the last resort, used only when as much value as possible has been removed. The scale of the challenge in South Africa is enormous, she says, as nearly 90% of all waste is sent to landfill with little or no reuse or recycling.

Solutions emerging globally lie in part on technology: bicycles available on a pay for use basis when and where they are needed; ride sharing or taxi summoning apps instead of personal cars; selling unused rooms or apartments as B&B's instead of constructing more hotels; using 3D printing to meet real time demand, rather than holding stock. Others lie in rethinking design, materials choices and processes.

In South Africa, this dialogue is still in its early stages, however, government, the CSIR and some private sector leaders are actively engaging on what value it might hold for our economy and job creation.

Prof. Godfrey quoted studies, by the Ellen MacArthur Foundation and others, which assessed the economic benefits to the

EU and India. These estimate that EU businesses could achieve savings of €600 billion (8% of annual turnover), create 580,000 jobs and reduce total annual EU greenhouse gas emissions by 2-4%. The potential global savings are estimated at more than \$1 trillion.

In India a circular economy could bring annual benefits of US\$624 billion in 2050 compared with the current path – an amount of around 30% of current GDP. The focus areas for the Indian economy would be cities and construction; food and agriculture; and, mobility and vehicle manufacturing. Carbon emissions would also be 44% lower in 2050 compared to current paths, but would require Indian businesses to lead the way in the transition phase.

According to Prof. Godfrey, leading businesses like Nike are recognising that their role is more than following, they need to shape the future in more sustainable ways:

“Sustainability is the innovation challenge of our lifetime. Our ambition: Double our business with half the impact. This audacious goal will fuel our creative design process, drive innovation to disrupt our business model and transform the industry. It’s more than a concept. It’s our vision. We believe it is not enough to adapt to what the future may bring – we’re creating the future we want to see through sustainability innovation.” Nike.

Prof. Godfrey’s presentation can be accessed [here](#).

Mr. Indhul, the Executive Manager: Group Sustainability at Transnet, said Transnet’s work highlighted many areas of potential future business opportunity that at the same time help address direct and indirect sustainability challenges. For example, risks include planning for increased infrastructure spend on petroleum pipelines while automobile companies and customers focus increasingly on electric vehicles; the impact on export terminals and rail facilities should coal exports or iron ore demand decrease (assuming customers drive the use of recycled steel rather than steel derived from iron ore); and the impact of autonomous road freight systems on the road to rail modal shift.

Sherman Indhul’s presentation can be accessed [here](#).

To better understand the 'Transnet of tomorrow', Transnet created a multidisciplinary core team with analytical and mathematical ability; as well as creative and conceptual thinkers who were also process and detail oriented. They were given autonomy to lead in their knowledge domain. They followed principles of design and systems thinking tools (mapping systemic feedback loops, system dynamics modelling and network modelling). The core team added scenario planning focus groups, ideation and flow techniques to prevent groupthink and increased creative performance and synthesised outcomes based on emergent patterns and convergent pathways. Once the work was well developed they spread the findings throughout the organisation using dynamic videos and other means.

This innovative work, which extends over a thirty year time horizon to 2046, has now been included in Transnet’s public reporting, and can be accessed here: [Transnet IR report 2017](#).

For more information please contact Alex McNamara: AlexM@nbi.org.za

Business Action for Sustainable Growth

www.nbi.org.za

The National Business Initiative (NBI) respects your right to privacy, if you do not wish to receive any further Quick Briefs from the NBI, please click [here](#) and your name will be removed from the mailing list.