

INCOSE SA Western Cape Event of 2 July 2015

Sally-Anne Käsner on "A Different Approach"

By Paul de Villiers

Sally-Anne Käsner treated the members of the Western Cape Branch of INCOSE SA to an enjoyable and extremely relevant presentation titled "A Different Approach". With more than 12 years' experience as an environmental consultant, Sally-Anne's presentation provided fresh ideas on how the systems designed by systems engineers can better interface to the ultimate super-system – the natural environment. Her presentation focused on two topics, namely the Circular Economy and Industrial Symbiosis.



Our current economy is essentially linear, where the status quo is to "take, make and dump" in order to achieve something of temporary value. After a few slides of scary statistics, it was clear that this approach is rapidly becoming unsustainable. Natural systems, on the other hand, operate on a "circular economy" where biological nutrients are returned to the environment after they have served their purpose, thereby sustaining the next generation of life.

Current thinking is to try and emulate a circular economy, not only for biological nutrients, but also for "technical nutrients", such as the constituent materials of consumer products. Using good design, products can be maintained, reused, refurbished, recycled into new products or converted to energy with minimal need for new raw materials or wastage.

One of many approaches that can contribute to achieving a circular economy is Industrial Symbiosis, which is the agreement between unrelated companies to use each other's material or energy waste streams. The town of Kalundborg was presented as the world's first example of industrial symbiosis, where there are over 50 designed symbiotic relationships between industries. For example, fly ash produced by the power station is recovered and used in the making of cement. Yeast slurry from an enzyme factory is used by pig farms and biogas producers.

Interestingly, the Quality movement has long known that reducing waste leads to a more efficient operation. Likewise, the principles of the circular economy carry significant financial benefit. As competition increases, the reduction of waste will not only be critical for sustainability - it will also be a business imperative.

Sally-Anne's presentation was followed by lively discussion, after which our speaker was thanked in the traditional INCOSE SA fashion. The event was attended by 13 members and 10 guests. It was good to have a number of students among our guests. A special commendation also needs to go to the commitment of our members from the Overberg Test Range near Bredasdorp, who braved the 3-hour journey to Stellenbosch!

The audio recording of the event and slides presented are available on <http://iono.fm/c/123>. Further information on the topic can be found by following these links:

- <http://www.ellenmacarthurfoundation.org/about>
- <http://www.mbdc.com/cradle-to-cradle/c2c-framework/>

