

1. Enabling Circular Economy

Precast Concrete and its place in Hong Kong, Historically,
Contemporaneously and for the Future.

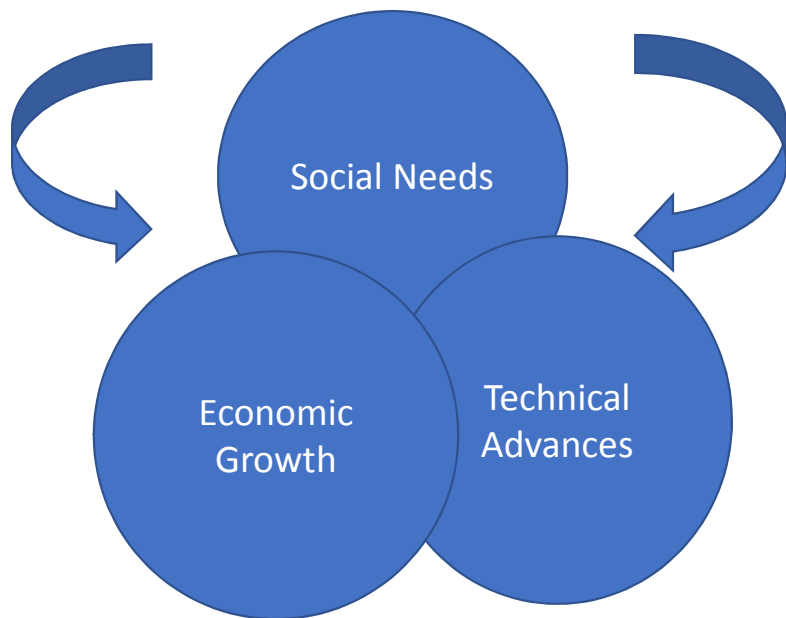
2 Wikipedia – the new social definition!!

- A **circular economy** (often referred to simply as "circularity"^[1]) is an economic system aimed at minimizing waste and making the most of resources. In a circular system [resource input](#) and [waste](#), [emission](#), and energy leakage are minimized by slowing, closing, and narrowing energy and [material loops](#); this can be achieved through [long-lasting design](#), [maintenance](#), repair, [reuse](#), [remanufacturing](#), [refurbishing](#), and [recycling](#).^[2] This regenerative approach is in contrast to the traditional linear economy, which has a 'take, make, dispose' model of production.^[3]

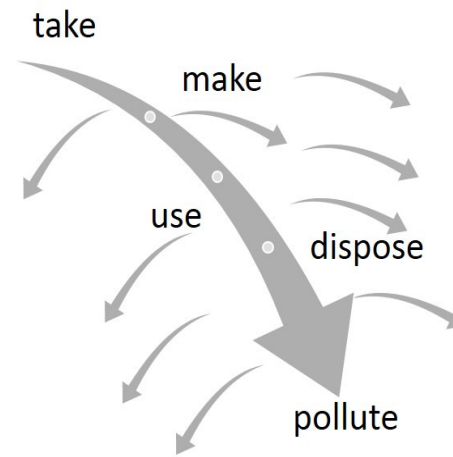
3. Social Needs and their Interactions

There seems to be an old and a new type of “Circular Economy” and we cant have one without the other to kick start it and keep it going!

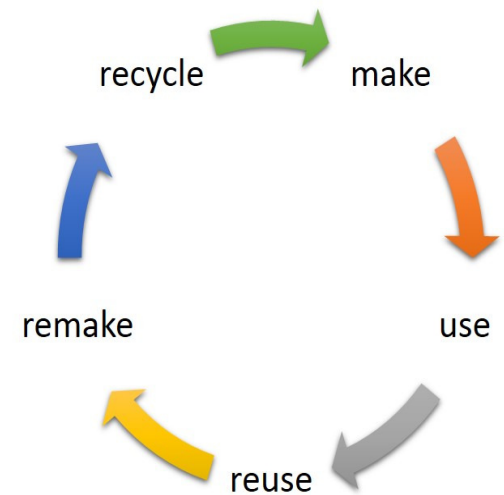
The Old Circle (traditional)



The Linear

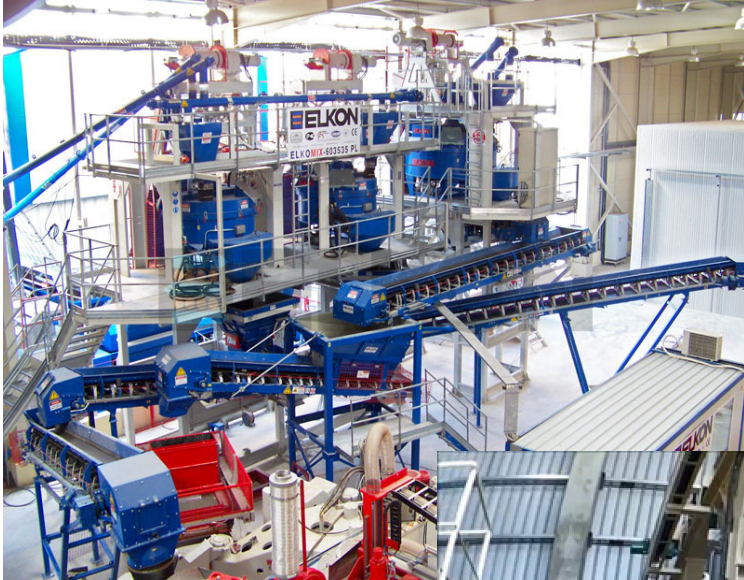


The New Circle



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4. Automation in Precasting



5. Was precast used here – or?????



6. Joseph Monier

2E8 Materials (Civil Engineering Component)

- **Concrete History**

- Reinforced Concrete Flower Pot (Joseph Monier 1867)



ARUP

Design that makes a difference

7. The refugee influx.



8. Hillside squatters.



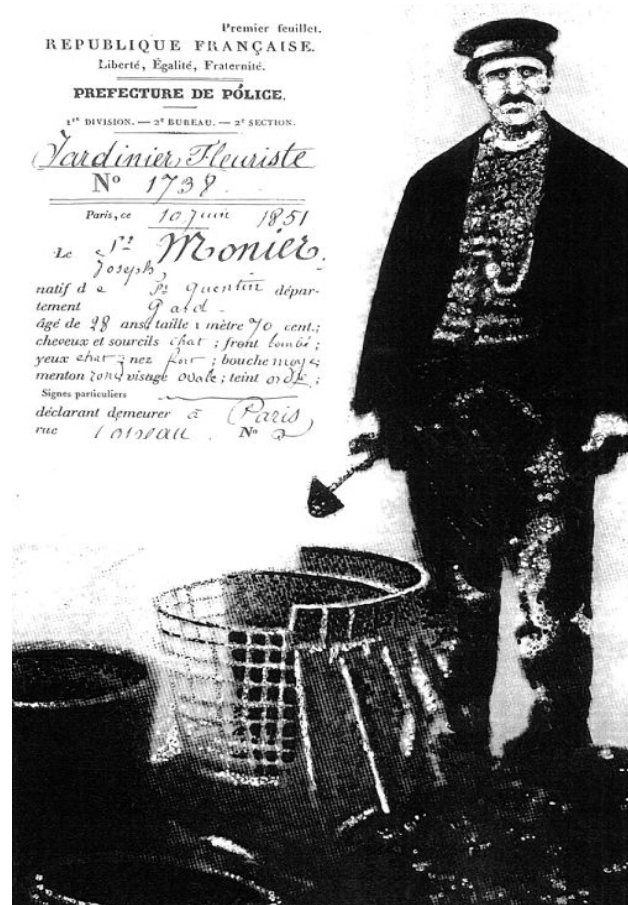
9. Was any Precast used here?



10. Francis Coignet



11. Where it all started....Joseph Monier



12. Shek kip Mei.... A social catalyst;



13. The need for Low Cost Housing..

Tai Hung, 1965



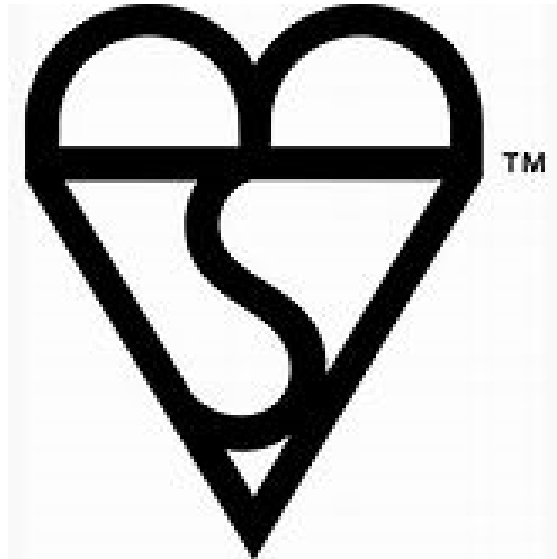
14. Salt water and Concrete Cancer.



15. Building roads causes congestion



16. The British Standards, Kite Mark!



17 High Island Dam



18. Lining the first Cross Harbor Tunnel.. From steel tubes to finished interior using precast panels...1969.



19. New Enabled Pre-Cast Yards & Products



20. More Production Capacity— For example, all concrete pipe production had moved from HK to Shenzhen by 1999, and a substantial increased production capacity was achieved



21. What this Enabled for the HK Housing industry;

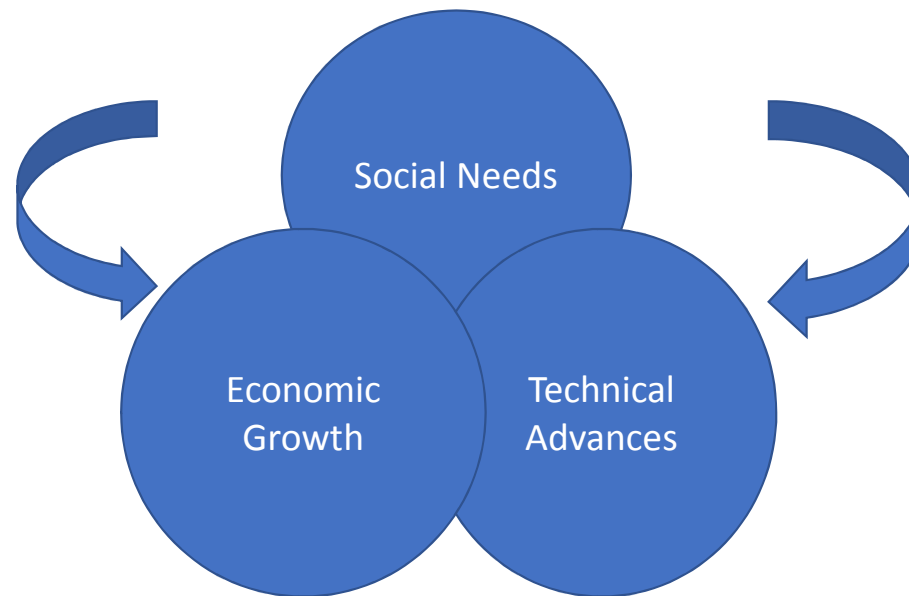


22. Components to build new roads, but needing the upgraded existing roads to be able to be transported– the circular economy at work!



23. Social Needs and their Interactions

What is driving what and in what direction?



24. Changing circumstances



25. Changing times.

- Millennials, also known as Generation Y or Gen Y, are the [demographic cohort](#) following [Generation X](#) and preceding [Generation Z](#). Researchers and popular media typically use the early 1980s as starting birth years and the mid-1990s to early 2000s as ending birth years. Millennials are sometimes referred to as "echo boomers" due to a major surge in birth rates in the 1980s and 1990s, and because millennials are often the children of the [baby boomers](#). The characteristics of millennials vary by region and by individual, and the group experiences a variety of social and economic conditions.

26. The future with Gen Z??

57 story High rise built in 3 weeks --in China!



3D printing of entire houses



27.

Thank You.