

# 1. Enabling Circular Economy

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

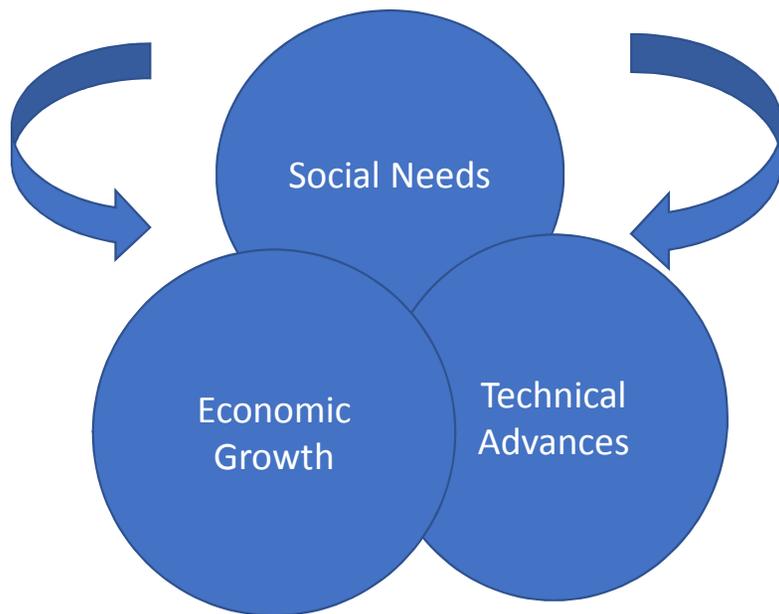
## 2 Wikipedia – the new social definition!!

- A **circular economy** (often referred to simply as "circularity"<sup>[1]</sup>) 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](#).<sup>[2]</sup> This regenerative approach is in contrast to the traditional linear economy, which has a 'take, make, dispose' model of production.<sup>[3]</sup>

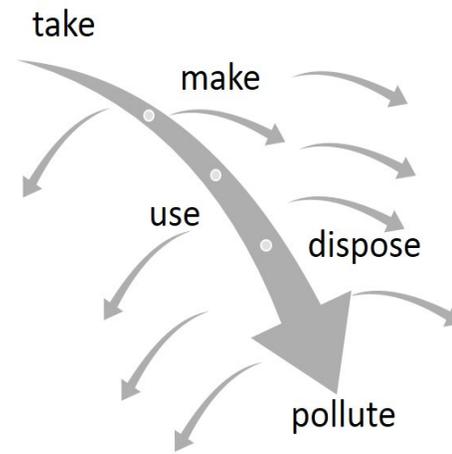
### 3. Social Needs and their Interactions

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!

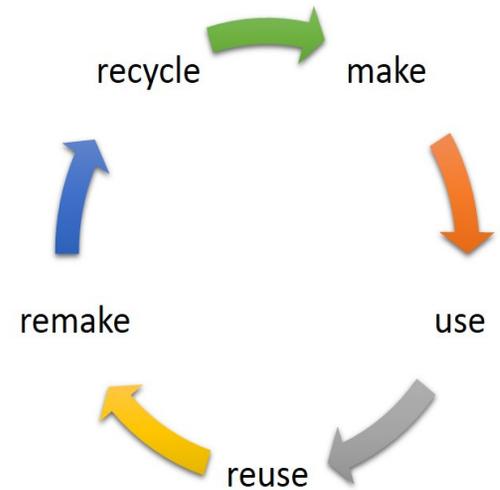
The Old Circle (traditional)



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.



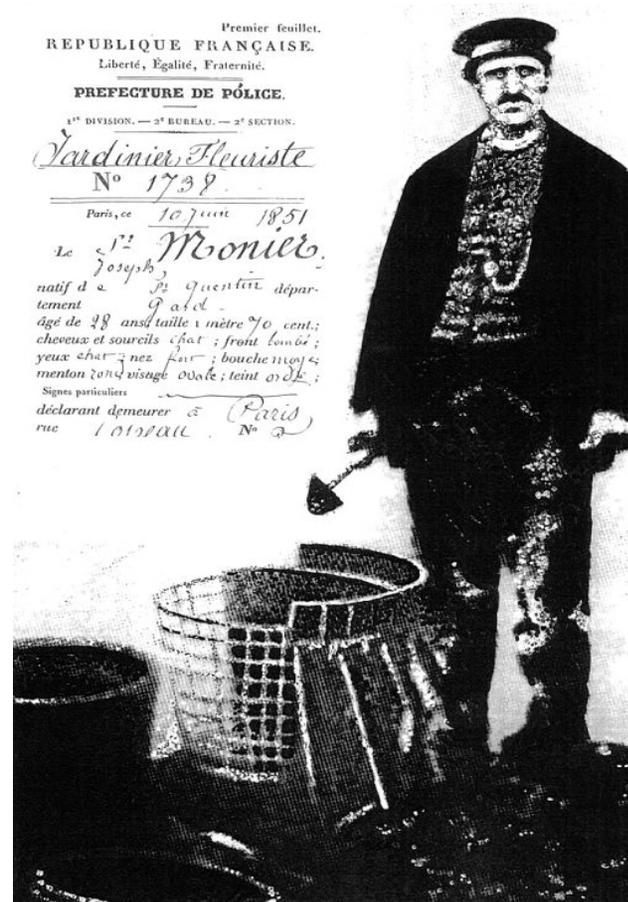
## 9. Was any Precast used here?



# 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



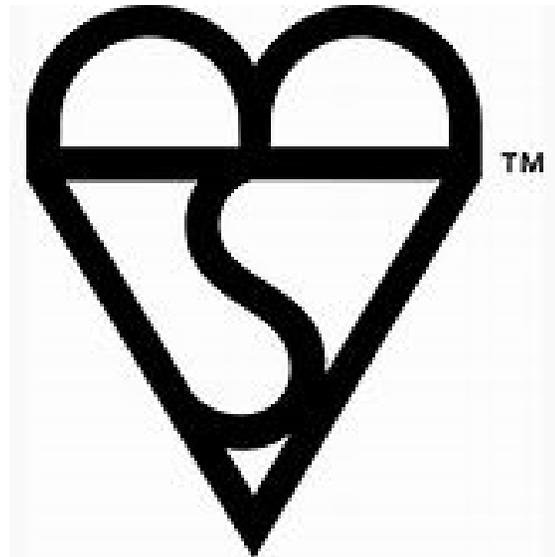
## 14. Salt water and Concrete Cancer.



## 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;

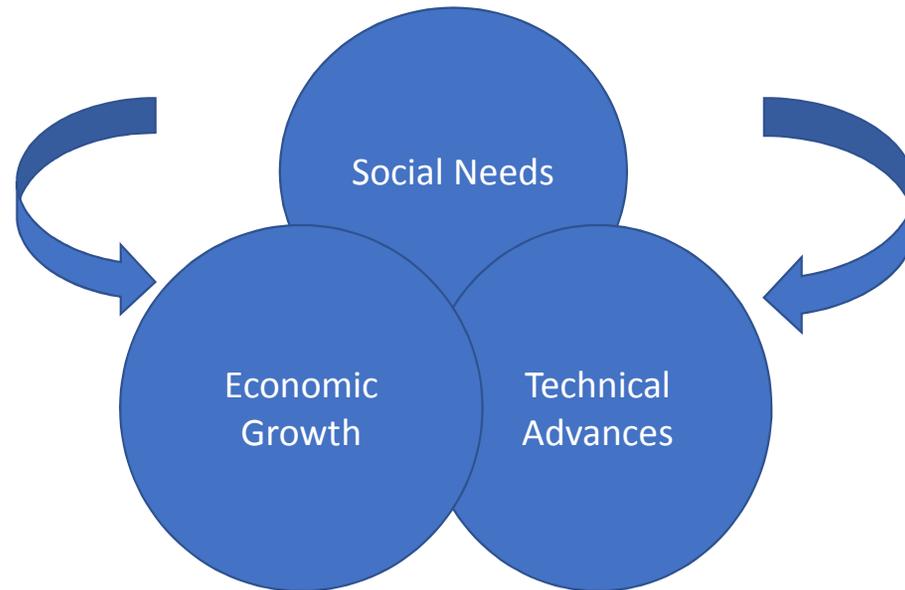


22. Components to build new roads, but needing the upgraded existing roads to be able to be transported– the circular economy at work!



## 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.