

## How can urban design create a viable and liveable off-world city? A city on Mars.

Presenters: Cassie Barrow (Urbis)

Once upon a time humans were racing to the Moon in an effort to display national power. Ever since, humans have continued to look to space curiously, wondering what is out there and what is the potential. Others think it's rubbish. Regardless of your view, interplanetary colonisation is on the worlds radar.

Some of the world's greatest minds think we need to develop off-world civilisations for the sake of human survival:

"I don't think we will survive another 1000 years without escaping our fragile planet" (Stephen Hawking 2006).

Elon Musk shares this concern and wants to make humanity a space-faring and multi-planetary species, setting a target for his company SpaceX to get man to Mars by 2024.

Despite clear interest in off-world colonisation, particularly that of Mars, focus has been directed towards the engineering and sciences that ensure we will survive, but little consideration has been given to the social sciences that will ensure the city is liveable. Pass terms this as the 'great divide' and says that liveability must be the standard, not survivability, or else the civilisation will not sustain.

The final year of my Urban Planning Honours Degree saw me explore this gap as my research dissertation, questioning "how can urban design create a viable and liveable off-world city." I paid particular attention to Mars given current ambitions and manifested an urban design for a Martian city based on the findings of my research. An extensive literature review was undertaken, to explore what our human viable and liveable needs were in this circumstance. Following, an extensive Enquiry by Design process engaged six urban design and six scientific experts to determine how urban design can contribute to viability and create liveability.

Not only are these findings useful for our literal colonisation of Mars, they are transferable to any off-world situation. Moreover, the research provides a reflection on our planning systems on Earth and sets a standard for achieving viable and liveable, hence sustainable cities. The findings question the status quo of planning – one in which is unresponsive to innovation and changing social needs; unorganic; wasteful and inefficient; and disconnected from its society, rather reflecting upon why it really is that we plan cities – for a viable and **liveable** experience.