

CSCLeaders for Students 2014-15 Challenge

What makes a city smart?

Cities are growing at a rate previously unseen before. Today, for the first time in human history, the majority of the world's population live in urban areas and this is set to rise; the 21st century will see the population of city dwellers double, by 2050 70% of us will live in a city.

Cities have long been places that draw people in, attracted by the prospect of economic opportunity, social interaction and cultural diversity which rural life can struggle to provide. Since the beginning of the 20th century we have seen a sharp increase in the number of people living in cities from 220million to over 3.4billion, putting an immense strain on all aspects of urban life: transport, infrastructure, education, employment, housing and crime levels are all feeling the impact. Cities also have a significant environmental impact on the world we live in; urban areas are responsible for 70% of all greenhouse gas emissions even though they only take up 2% of land area.

Former UN Secretary-General Kofi Annan throws down the gauntlet for the challenge we face:

'We have entered the urban millennium. At their best, cities are engines of growth and incubators of civilisation. They are crossroads of ideas, places of great intellectual ferment and innovation...cities can also be places of exploitation, disease, violent crime, unemployment, and extreme poverty...we must do more to make our cities safe and liveable places for all'.

In recent years cities have turned to technology as a potential solution to some of these pressing challenges; recent research has shown that the global smart city solutions industry (producers of smart city technology and associated goods and services) will be worth over \$400billion by 2020. And increasingly there is great promise that technological innovation can solve many of our problems – self-driving cars cut down on congestion delay and emissions, sensors and digital analytics on power grids reduce energy wastage, collection and integration of publicly available data reduces crime and protects citizens, buildings equipped with sensors efficiently moderate and minimise their own energy use, online educational platforms offer free access to some of the world's best educational resources for anyone with an internet connection and the construction of the first ever 3D printed house could have huge implications for the provision of affordable housing on a mass scale.

But can technological innovation alone provide the answer? In the cities of the future how do we ensure that communities flourish? That the gap between rich and poor doesn't create a breeding ground for social unrest? That amongst all the efficiency that technology offers, a city remains an environment that people want to live in?

What does the smart city of the future look like, and what do we need to do today to ensure our urban areas are hospitable – both to the surrounding environment and the ever increasing number of people that inhabit them?