

systems [79]. AIS exhibit properties of their biological counterparts: they are distributed, robust, dynamic, diverse and adaptive. Since intrusions are seldom repeated, security systems have to be flexible enough to adapt and respond to novel situations constantly.

If used properly, living technology could also reduce crime rates. Having an effective police is not a solution for urban crime, since its causes seem to lie in unemployment, lack of opportunities, social influence, and several other factors [132]. Nevertheless, crime prevention is necessary, and it will be more effective if it exhibits properties of living systems [44], since changing circumstances, trends and behaviors open constantly new niches for crime. Thus, an effective crime prevention has to adapt to these changes, to learn from previous experiences, and to be robust in the process. It might be just a coincidence, but life has become safer as technology has evolved [104]. The causal relations between technology and safety have yet to be explored, but this trend probably will continue, increasing safety as technology becomes “more living”.

### 3.6 Sustainability

Sustainability is the capacity to endure. For cities, sustainability involves not only environmental relations, but also economical and social. Material and energetic resources are required to “fuel” cities, as well as economic and social benefits to attract and sustain citizens [124].

Concerning material sustainability, pollution has to be considered. If there is less waste produced, then the complexity of waste management will be reduced. Cleaner and more efficient technologies can help in this direction. For example, if traffic flow is more efficient, less pollution will be produced by motor vehicles. Also, local production reduces transportation and transmission burdens, but the cost of production might be higher. Thus, a balance between mass production (cheaper to produce but distribution required) and local production (more costly to produce, cheaper to distribute) should be sought. Nevertheless, living technology can contribute to both reducing the cost of local production and to increase the