

IFR Top 10 Tech futures for 4IR

1. Big data
 - Discernment & sense-making
2. AI, robotics, machine learning & related sentient & autonomous 'tools'
3. Disintermediation, convergence & sharing platforms
4. IoT, IoEverything & MtoM
5. Nano, self-healing and other responsive technology e.g. self-healing concrete
6. Exponentials & Speed
7. Tele, mobile & remote, e.g. drones(UAV's)
8. Wearables & implants
9. 3DP/additive production
10. Security

	Personal	Property	Organisational
Physical			
Cyber			

1. The generation and navigation of a new value chain of **Imagination-Anticipation-Creativity-Innovation-Agility**.
2. **Purpose-driven Curiosity and Life Long Learning.** For human (as opposed to machine) learning, utilitarian applications of learning may be combined with intellectual pleasure and the search for satisfaction of intellectual inquisitiveness. This includes meta-learning through which humans will review both what and how they learn. It has significant implications for the overall strata of society, including for a shift in university age profiles. Humans may also learn with a sense of purpose and meaning and, because of relentless change, may incorporate a comprehensive sensor network design into future human learning.
3. **Alternate, non-mechano, complexity-driven cognitive processing.** This includes a spectrum of thought modalities, including systemic, creative, adaptive & computational thinking as well as contextual intelligence. Successful humans of the future will also develop the ability for the Just-In-Time presentation of insights as well as an overall competency profile of deep generalism. Such non-mechano cognitive processing will include discerning divergence of thought in order to ensure thinking beyond disciplines, not only to multi-disciplinarity and cross-disciplinarity but indeed trans-disciplinarity.
4. **Competitive Enterprise.** This will include both intra- & entrepreneurship, because competition will increase, even relative to collaboration, driven mainly by demographics.
5. **Experience Transcendence.** Flourishing future humans will develop the ability to think beyond the realm of their personal experiences. This will include the suspension of judgement and disbelief, change resilience and adaptability. They will master role model transcendence, in which their aspirations will be set alight with imagination, rather than being dulled by narrow sets of predecessors. Salient examples may be role models for timing and mode of retirement as well as other dimensions of assumed age appropriateness.
6. **Discernment.** Because of the emerging reality of simultaneity experience, this will be especially vis-a-vis the noise-to-signal ratio, trend transcendence, new media literacy and tacit knowledge acquisition.
7. **Autodidactics.** Thriving future humans will learn to learn and unlearn without the intermediation of trained pedagogue. This will include elements of personal well-being, including expertise such as digital dieticianship, for which appositional editing and other pertinence reviews will be required.
8. **Social Intelligence, notably Empathic Collaboration & Design. Given the future reality of the presence of other humans, this will include competencies of diversity and conflict management.** It will extend beyond resilience, which may be criticized for its attempt to reach the status quo ante, and will include pro-silience, i.e. the ability to leap forward to new opportunity following a setback. Other social intelligence rudiments will include failure tolerance and even failure/pursuit in the interest of adventure learning, as well as persuasion and influence and crowd navigation, encompassing both discerning sourcing and participation.
9. **Evolutionary ecology,** including conceptual, organisational, personal and institutional ecological integration. The exponential rate of transition will necessitate a deep appreciation of how the systemic ecological configuration of the business or social landscape is shifting in order to anticipate risk and opportunity.

1. **Future funding.** Humans will require new savings and income generation mechanisms due to extended longevity and the need for requisite variety. This will encompass not only renewed retirement funding, but will crucially include
 - a failure fund, because of the incessant speed and the resultant impossibility of perfection
 - a life-stage transition fund in order to explore new career opportunities due to protracted careers
 - an adult education fund for retained or renewed competence relevance
 - a geographic relocation fund as talented humans migrate to access global opportunities
 - an ERP (Experimentation and Rapid Prototyping) fund in order to test the viability of new ideas
 - a reflection and maturation fund, formerly associated with gap years for students, but in future extended to various life stages and for varying periods of time required for personal sense-making in order to internalize contextual volatility
 - a technology upgrade fund in order to remain current and access the latest benefits of technology, including a greenification of the human habitat and for transforming wearables into implants
 - a crowd equity management fund to promote new ideas to a global audience
 - unique exposure insurance due to the search for extreme individualism and distinctive experience.