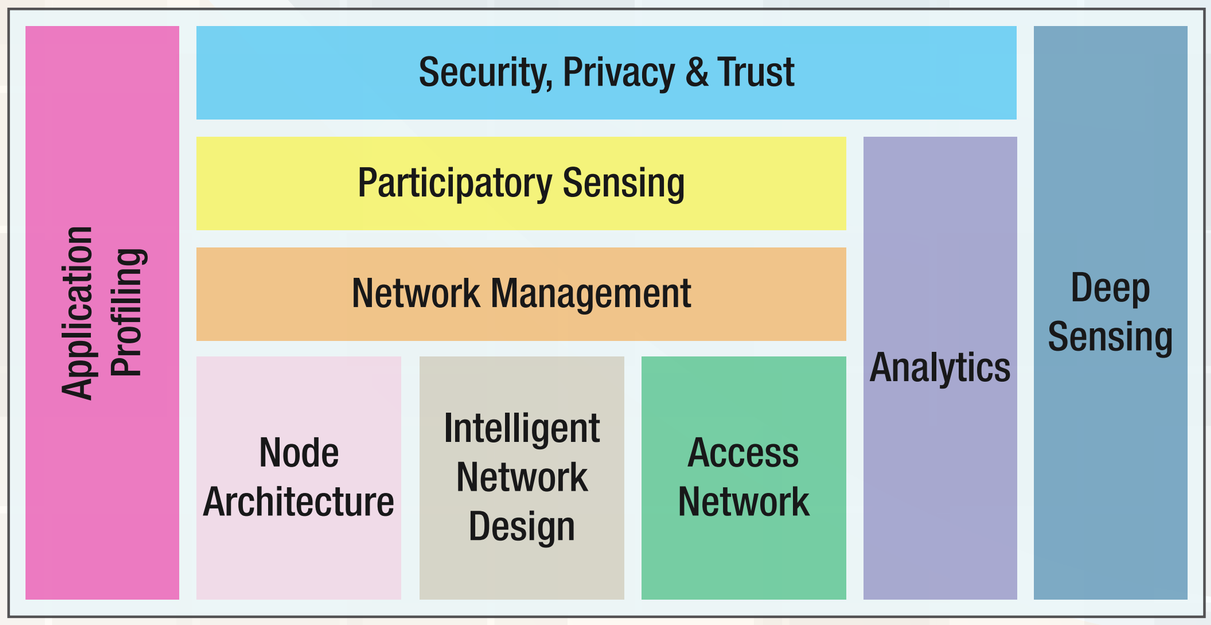
Sense & Sense-abilities

A R&D programme within the Institute for Infocomm Research

The future is now

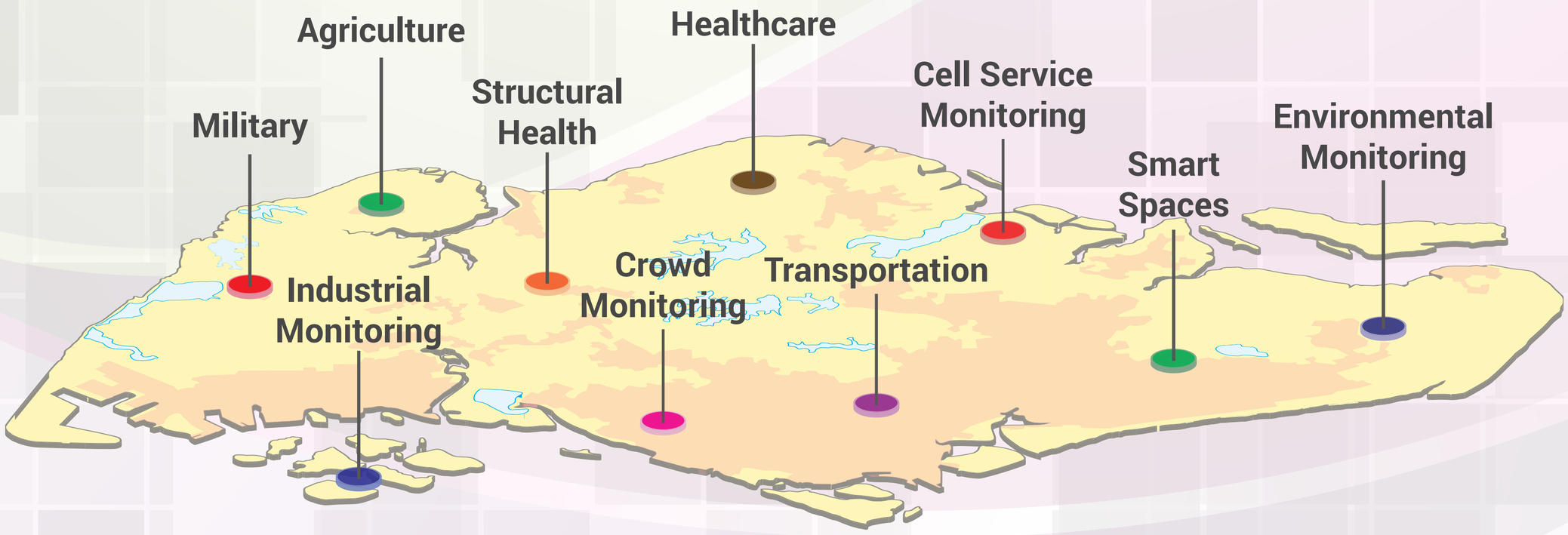
Increased urbanization is putting a strain on land resources and quality of life. As cities and roads become more congested, urban solutions are required to provide real-time information about the environment. This allows various government agencies to make informed decisions to provide a safe and clean living environment for city dwellers.

A unified, scalable platform



A*STAR's Sense and Sense-abilities (S&S) Programme envisions to conduct integrative R&D to define the reference architecture for an end-to-end platform for real time, large scale and heterogeneous 'sensing' and 'making-sense' of our living environment. The S&S platform will be tested and validated with various government agencies. Our core capabilities include: (*A*) systematic profiling of sensing and actuation applications, (*B*) plug-and-playable sensor and actuation node and network architecture, (*C*) complete network management suite for visualization, security, and control, as well as (*D*) human-centric sensing with high participation and data reliability.

In addition, our R&D activities will be: (*A*) driven by actual needs of government agencies, (*B*) extensively test-bedded in real deployments across various sites in Singapore, (*C*) benchmarked against similar initiatives in Singapore and worldwide, (*D*) modular, to facilitate technology transfer (as end-to-end or component architecture) to the industry for city-wide deployment, and (*E*) in line and collaborative with related urban solutions initiatives in A*STAR, IDA as well as EDB.



Technology Features

- Comprehensive sensing solution - from application profiling, to network design and management, to the sense-making of data
- Multi-modality sensor support
- Fault-resilient architecture
- Advanced visualization capabilities
- Support for heterogeneous access platforms
- Network and data security
- Ease of network management
- Smart sensing using neural-learning strategies

Value Proposition

- Scalability
- Modular node and network architecture
- Vendor-independent hardware platforms
- No vendor-contract tie-in
- Plug-and-play design
- Open architecture
- Cost-efficient
- Multi-agency data sharing

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