Identified Needs & Requirements

Interoperability – The ability of a system to exchange and make use of information with other systems or products without special effort on the part of the user.

Reliability and Connectivity – 100 % connectivity for radio, cellular, and wireless networks despite geography and topography—urban canyons, subways, basements, or other dead zones.
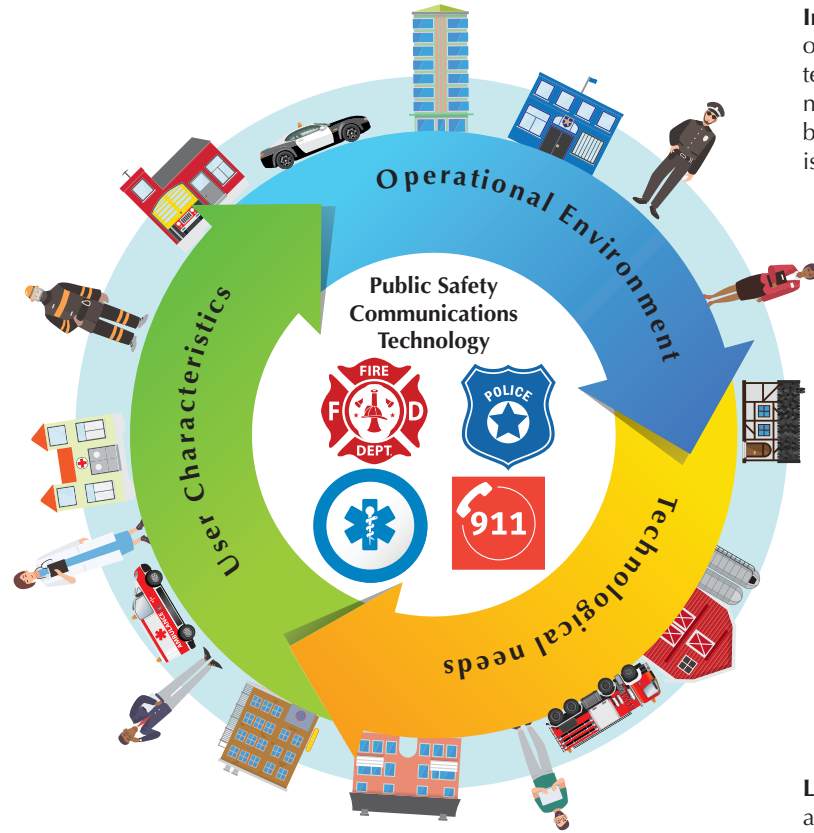
Accountability and Location – Development of technology that provides for accountability and location tracking of the crew, units, 911 callers, and building occupants.

Maintenance, Technical Support & Training – Minimization of the burden and costs of the associated maintenance, technical support and training of technology imposed on users and departments.

Organizational Policies & Administration – Facilitation and promotion of technology adoption by first responders through policies, procedures, and administration to minimize barriers and hindrances to use while supporting first responders' primary tasks.

Public Safety Communications Technology

Operational Environment

User Characteristics

Technological needs

Guidelines

Improve Current Technology – improve functionality of what first responders currently have. Make technology more affordable and reliable. It is not necessarily new technology that first responders want, but the improvement of current technology that they believe is most important.

Reduce Unintended Consequences – develop technology that does not interfere with first responders' attention to primary tasks–which can cause distraction, loss of situational awareness, cognitive overload, and over-reliance on technology.

Recognize "one size does not fit all" – technology must accommodate the wide variety of public safety needs– across disciplines, personnel, departments, districts, contexts of use. All are different, requiring easy adaptability and configurability.

Minimize "technology for technology's sake" – develop technology with and for first responders driven by their user characteristics, needs, requirements, and contexts of use.

Lower Product & Service Costs – develop technology at price points that departments can afford, lowering costs for technology. Price-points must be feasible and scalable for widespread distribution.

Require Usable Technology – know thy user and develop 'Fisher-Price'* solutions – simple, easy to use, light, fast, and not disruptive. Technology should make it easy for the user to do the right thing, hard to do the wrong thing, and easy to recover when the wrong thing happens.

*Any mention of commercial products within this infographic is for information only: it does not imply recommendation or endorsement by NIST.