

NASA Charts Course for Information Technology Development

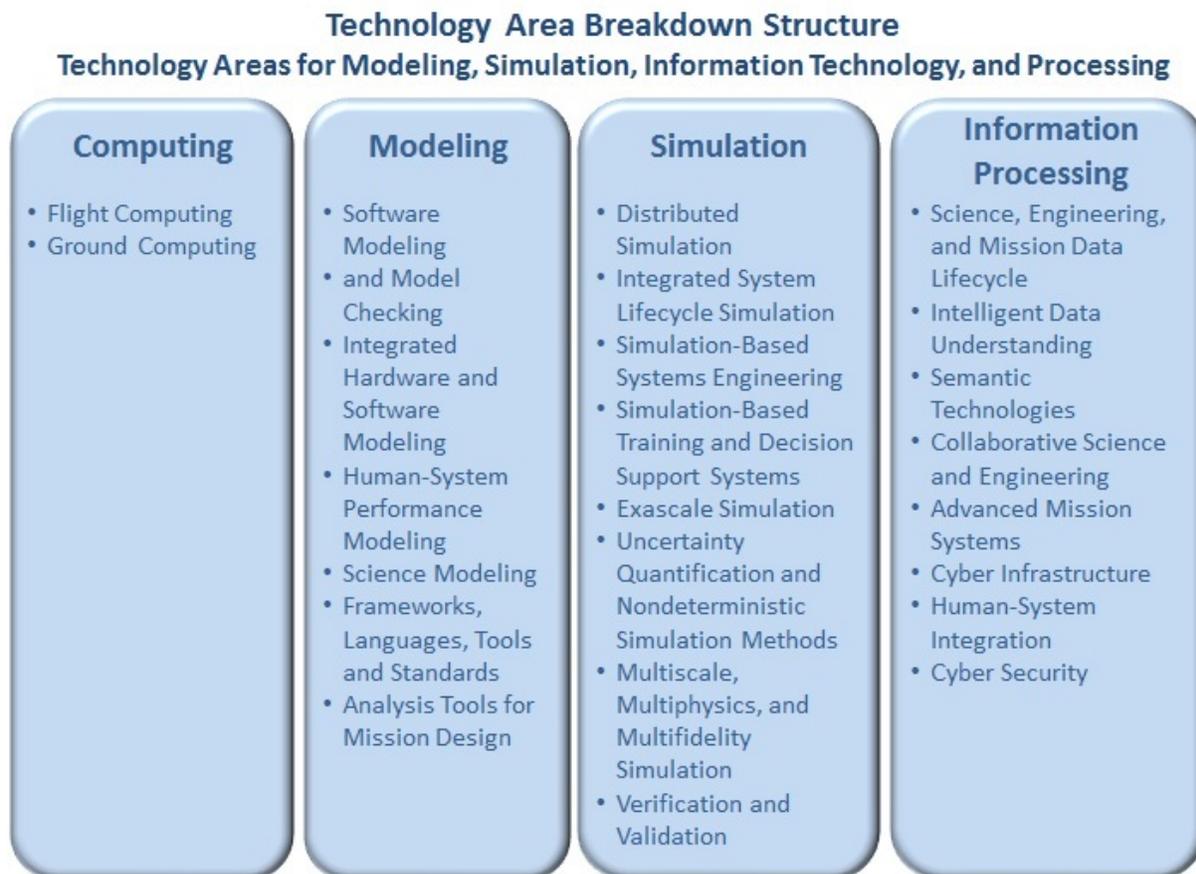
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The National Aeronautics and Space Administration (NASA) is seeking input on drafts of the organization's technology roadmaps that will shape priorities for the next 20 years.

Five years ago, in 2010, NASA developed a set of technology roadmaps to guide space technology developments. This month, NASA released drafts updating and expanding on those fourteen roadmaps. These documents will serve as a foundational piece of the Strategic Technology Investment Plan (STIP), which will lay out a strategy prioritizing technology developments and establishing principles for investment. NASA's web-based system, TechPort, tracks and analyzes technology investments. Together, the roadmaps, STIP, and TechPort enable portfolio management for NASA's technology spending, aligning investments and reducing duplication.

The 2015 NASA Technology Roadmaps cover fifteen Technology Areas. Crosscutting technologies, like avionics, autonomy, information technology, and space weather, span multiple sections. Focusing on applied research and development activities, NASA's Technology Roadmaps cover a broad set of needed technologies and development approaches for the next 20 years (2015 to 2035). The Modeling, Simulation, Information Technology, and Processing Technology Area highlights advances in flight and ground computing capabilities, physics-based and data-driven modeling, as well as information and data processing frameworks, systems, and standards. The capabilities addressed within this area impact other technologies across the NASA portfolio, enabling application-specific modeling, simulation, and information technologies called out in other roadmaps to support the ever-increasing challenges of NASA missions.



Source: Draft of 2015 NASA Technology Roadmaps

Despite parts of the discipline-specific nature of parts of the technology area, many of the capabilities will enable advances in modeling and simulation for areas addressed in other roadmaps, which address specific domain perspectives. The current roadmap continues the pattern of previous versions, listing Modeling and Simulation separately; however, given the high degree of their interrelation, the roadmap contents often reference them together.

Goals for the next twenty years include development of transformational flight and ground computing capabilities, increased modeling productivity and fidelity, simulations to enable risk management across the entire system lifecycle, and progress around leveraging NASA's massive volumes of observational, sensor, simulation, and test data. Ultimately, these capabilities will help to empower decision makers and support

NASA's missions.

NASA released a request for information (**RFI on May 11, 2015**) associated with the road map drafts. The space agency is looking to determine if the correct state of the art has been identified, gauging interest in space applications from commercial industry and other government agencies, use of technology for non-space applications, and exploring partnerships for technology development. The comment period is open until June 10, 2015.

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