

REINVENT THE SKY ACCELERATE FROM CONCEPT TO ORBIT ON THE CLOUD



DESIGN, PROTOTYPE AND VALIDATE NEW SPACE INNOVATIONS

In the New Space area, shakers are revolutionizing the market with reusable launchers and expanded lifespan satellites, to realize their sustainability goals. Disruptive players are in need of agile technologies to support their creative concept, innovative design and increasing production demand. Companies must significantly increase the degree of integration of their innovations to develop more advanced, complex and capable space technology that can compete within the market.

The **Reinvent The Sky** Industry Solution Experience supports startups, Small and Medium Enterprises (SMEs) and Original Equipment Manufacturers (OEMs) in developing disruptive solutions for space launchers and satellite propulsion. Companies seeking new ways to integrate technology into product development can leverage the solution on the cloud to accelerate the product lifecycle from concept to orbit and gain competitive advantages.

Shorten the Time from Concept to Prototype

Controlled execution provides all engineering teams access to the same **3DEXPERIENCE®** twin and its related project information. During the concept definition phase, engineers can transform an idea into a conceptual design using powerful trade-off studies that allow engineers to simulate thousands of design variations to find the right one to meet specifications. This same automated iterative process used later in the detailed design phase in the development of the new system. By using the **3DEXPERIENCE** twin instead of physical prototypes, the time to prototype is accelerated.

During detailed design, a multi-disciplinary digital mock-up, or DMU, combines:

- Structural technologies such as composites, sheet metal, and 3D printed parts;
- Systems installation, such as a plane's electrical harness; and
- Multi-physics and mechatronics engineering integrating realistic behavior during this phase of engineering.

Operational Efficiency through Digital Manufacturing

Using powerful simulation to optimize manufacturing automation and plant layouts as well as supply chain management, companies benefit from faster manufacturing rates and higher quality. **Reinvent The Sky** leverages the power of the virtual before building anything in the physical world and fully leverages the know-how of all team members across the extended enterprise to help drive higher margins.

Ensure Digital Continuity from Concept to Take-off

Digital Continuity across all processes delivers an Integrated Value Stream that improves efficiency, and flexibility of the business. This helps to generate faster ROI on technology investments. The integrated digital value stream (concept, detailed engineering, manufacturing planning) ensures any modification ripples across all engineering processes without rework and under control of change actions.

The native **3DEXPERIENCE** platform does not require data cleaning, translations or rework all along the different steps and through the different engineering disciplines. By eliminating inefficiencies in the design process, the **Reinvent The Sky** solution ensures product quality.

Continuous Control

Real-time program execution from concept to prototype allows companies to make decisions faster and start working with external stakeholders sooner. **Reinvent The Sky** also provides complete traceability of actions and decisions taken during the engineering process that can be leveraged during impact analysis and in case of a change of specifications.

Nimble Cloud Deployment

A cloud business model fits the needs of an SME, offering access to the same technology available to the largest OEMs in the world. Companies also reap the benefit from having little to no IT overhead costs for the hardware and staff needed to implement enterprise software. Using the cloud-based **Reinvent The Sky** solution on the platform allows better collaboration across functional teams (engineering, manufacturing, test, and supplier management). The solution helps companies scale to meet project maturity level and company growth.

Innovative small- and medium-sized OEMs can optimize program from development through manufacturing execution and leverage the power of digital continuity on the **3DEXPERIENCE** platform on the cloud.

KEY BENEFITS

- Accelerate the time from concept to prototype with less IT hardware and staff by leveraging a single platform on the cloud.
- Provide full traceability for OEMs and drive execution across teams or organizations by leveraging real-time key performance indicators.
- Keep programs on track and manage continuous change over the lifespan of the program.

For more information on **Reinvent the Sky**, visit:

<https://www.inceptra.com/reinvent-the-sky/>



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Dassault Systèmes, the **3DEXPERIENCE** Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating 'virtual experience twins' of the real world with our **3DEXPERIENCE** platform and applications, our customers push the boundaries of innovation, learning and production.

Dassault Systèmes' 20,000 employees are bringing value to more than 270,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com.

