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THE BLUE-SKY APPROACH: A UNIQUE INNOVATION METHOD IN HERITAGE SPACE  
ORGANIZATIONS

**Abstract**

Heritage space organizations, or primes, have used a requirements-based approach for decades. Albeit lengthy at times, the requirements methods are tried and true. A customer proposes a couple dozen top level requirements, the primes decompose the requirements into hundreds of more requirements for each subsystem, and then the primes determine the specifications that meet those requirements. The end result is a perfectly manifested system to the customer's liking, meeting all of their needs with no deviations. But what happens when a customer does not have a set list of requirements or is unsure what they want or need? Engineers in primes are less inclined to use a creative, new approach without set requirements. A new approach is required; a blue-sky approach with the aid of talented individuals who are not afraid to challenge the status quo.

The blue-sky approach is one that starts off where anything is possible. It is a tried-and-true approach used by modernized industries, such as the entertainment and technology industries. Any idea, thought, or expression is written down and visualized to achieve an objective. The team cuts upwards of 90

Primes can harness the power of the blue-sky method to form a hybrid blue-sky requirements method to combine the best of both. By starting off with marketability, rather than technical requirements, a prime can start with a blue-sky approach. Ideas that are chosen are marketable, in other words, a customer wants it and there are financial resources to pay for it. The top-level requirements can be formed from a feasibility perspective in which a customer is willing to pay for it and it is technically feasible based on present day or near future technology. Lastly, the implementation phase only keeps the top-level requirements that meet the main objectives and does not force detailed specifications on all components.

Primes can harness the power of modern innovation methods by using a hybrid blue-sky requirements architecture.