



**Development
Services Agency**



Third Frontier
Innovation Creating Opportunity

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Appendix C

Technology Commercialization Framework

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The Ohio Third Frontier promotes technology-based economic development within Ohio by funding activities that move technology from idea to market. Consistent with this goal, the Ohio Third Frontier identifies opportunities using the phases as set forth within the [Technology Commercialization Framework Guidelines \(Framework\)](#). The Framework consists of 5 phases: (1) Imagining; (2) Incubating; (3) Demonstrating; (4) Market Entry; and (5) Growth and Sustainability. Each phase is defined by a requisite level of customer validation. Transitions between phases are accomplished as resources are marshaled to support the transition (e.g. transitioning from Demonstrating to Market Entry may be supported by raising capital to expand manufacturing, sales, and customer support infrastructure). Definitions, customer validation expectations, and technology readiness level (TRL) at each phase of the Framework are summarized below:

Phase	Activity	Customer Validation	TRL
Imagining	<ul style="list-style-type: none"> Identify a commercial need, and develop a concept for how the need can be addressed with a new product or technology. Generate initial feasibility data or “proof-of-principle” for the opportunity. 	<p>Clear articulation of a market opportunity and general customer requirements, preferably with some direct customer interaction.</p> <p>Attraction of early stage resources necessary to establish feasibility.</p>	<p>DOD: 1-3</p> <p>NASA: 1-4</p> <p>DOE: 1-3</p> <p>API: 0-1</p>
Incubating	<ul style="list-style-type: none"> Define customer requirements and validate business model. Engage customers and funders to support development activities and acquisition of resources to advance commercialization. 	<p>Clear evidence of customer engagement in specifying new product and defining market opportunity. Ideally includes customer investment, such as R&D funding or product validation activity.</p>	<p>DOD: 4-5</p> <p>NASA: 5-6</p> <p>DOE: 4-6</p> <p>API: 2-3</p>
Demonstrating	<ul style="list-style-type: none"> Validate product in a customer/commercial environment. Achieve customer buy-in. Refine business model including a feasible operational model. 	<p>Direct input from customers who are using the product is critical at this phase. Validation of the business model in the form customer financial investment, such as investing capital or product purchase. Plans made to attract capital and other resources to support market entry.</p>	<p>DOD: 5-7</p> <p>NASA: 7-8</p> <p>DOE: 7</p> <p>API: 3-4</p>
Market Entry	<ul style="list-style-type: none"> Launch commercial product. Secure one or more paying customers. Develop clear business, operational, and financial plans. Product may require additional refinements to optimize cost, support scale-up, or reach new customers. 	<p>Achievement of one or more full commercial transactions (paying customer, product in a commercial, non-prototype form). Refined business plans, including plans for attraction of capital and other resources.</p>	<p>DOD: 8-9</p> <p>NASA: 9</p> <p>DOE: 8</p> <p>API: 5-6</p>

Growth & Sustainability

- Demonstrate sales growth and profitability.
- Execute comprehensive business plan.

Established customer base. Pricing and cost model validates business profitability and sustainability. Personnel, assets, and other resources acquired and sustained.

DOD: 9
NASA: 9
DOE: 9
API: 6-7