

SBA 2024

GROWTH
ACCELERATOR
FUND
COMPETITION

STAGE ONE
CATALYZE

CONTESTANT: STRIPER SOLUTIONS LLC
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THEME AREA: DOMESTIC MANUFACTURING AND PRODUCTION, INCLUDING
SUPPLY CHAIN, INFRASTRUCTURE AND MANUFACTURING
TECHNOLOGIES

VIDEO LINK: [LINK TO VIDEO](#)



OUR MISSION

EMPOWERING SUCCESSFUL PRODUCT
DEVELOPMENT AND DEPLOYMENT THROUGH
EXPERT ENGINEERING AND MANAGEMENT
CONSULTING

Who We Are:

- Striper Solutions LLC is an engineering-based product consulting company, providing support for the transition of technology to reliable products in a variety of industries
- Striper was founded in 2013 by David Connor, an IEEE product consultant with over 30 years experience in the development of equipment for commercial and industrial applications
- As a product development consulting company, Striper depends on strong relationships with technical engineering service providers to ensure their customer's success

Our Vision:

- To be a trusted partner for companies navigating complex product development challenges, ensuring seamless integration, regulatory compliance, and market success



THE STRIPER ECOSYSTEM

STRIPER IDENTIFIES CUSTOMER'S DEVELOPMENT NEEDS AND WORKS WITH ECOSYSTEM PARTNERS TO RESOLVE CUSTOMER PRODUCT ISSUES

OUR SUCCESS IS MEASURED BY THE SUCCESSFUL LAUNCH OF OUR CUSTOMER'S PRODUCTS. MORE SUCCESSFUL PRODUCT LAUNCHES MEANS MORE BUSINESS FOR THE ENTIRE ECOSYSTEM.



As a product development consulting company, the Striper Solutions LLC Ecosystem includes:

- **Design and manufacturing companies:** Striper's direct customers that design and manufacture products
- **Engineering services companies:** These companies provide a variety of services, such as product design, development, or testing. They may also offer specialized services, such as signal and power integrity consulting.
- **Regulatory agencies:** These agencies are responsible for ensuring that engineering products meet safety and other standards.
- **Product Test Facilities:** Certified test facilities dedicated to product testing to established standards

SUPPORTING INCLUSIVE INNOVATION

KNOWLEDGE IS AN EQUALIZER, ENABLING
UNDERSERVED AND/OR UNDERCAPITALIZED
COMMUNITIES WITH THE HARD-WON
EXPERIENCE THAT IS TYPICALLY ONLY
AVAILABLE TO WELL-ESTABLISHED AND WELL-
CAPITALIZED ORGANIZATIONS



Technology commercialization involves complex requirements to ensure safety, reliability, and regulatory compliance

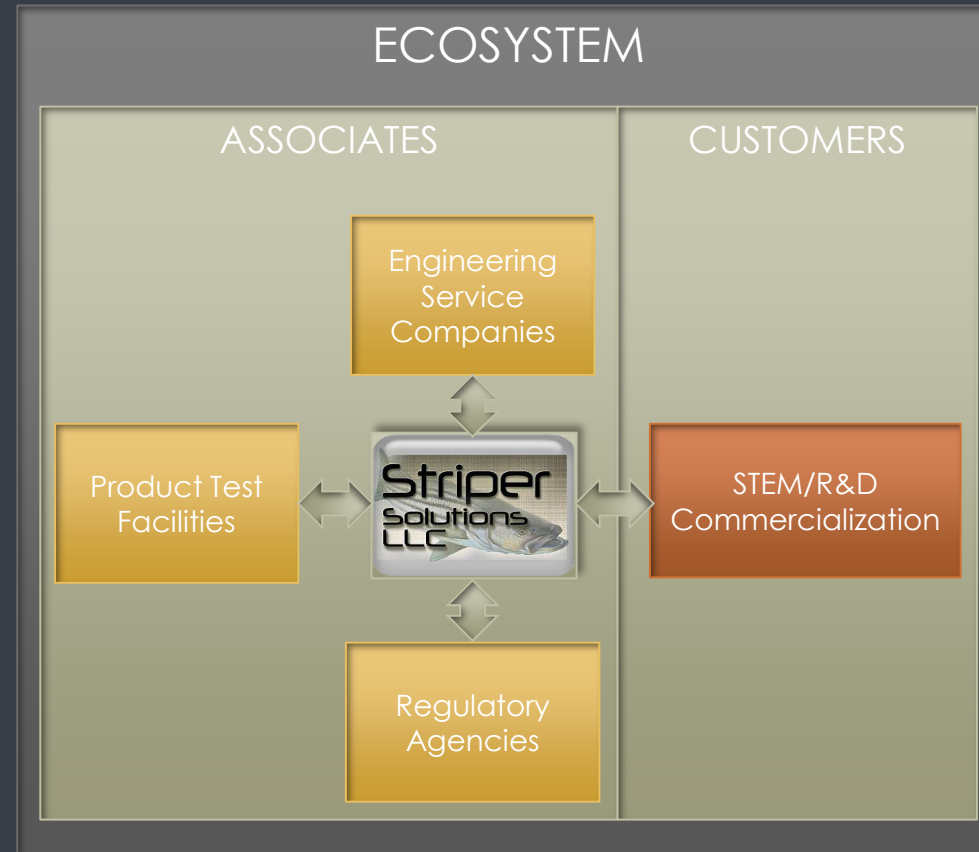
- Methods to achieve these requirements are generally established by well-capitalized organizations, through years of experience

As Striper identifies and works through areas of need for our customers, we also create educational materials to support future technology development

- These technical materials are provided free-of-charge in the [Technical Documents](#) section of the striperllc.com website
- Currently available materials include product development flowcharts, regulatory compliance checklists, informational white papers, etc.
- The materials are intended to inform and educate product developers that would otherwise not know of the requirements or have access to methods to deal with these complex requirements

SUPPORTING THE ECOSYSTEM

STAGE ONE PRIZE FUNDS WOULD BE USED TO EXPAND INFORMATIONAL AND EDUCATIONAL MATERIALS IN KEY AREAS OF PRODUCT DEVELOPMENT, EXPAND OUR NETWORK OF ASSOCIATES, AND PROVIDE NEEDED WEB RESOURCES TO TARGET STARTUPS AND SMALL BUSINESSES TECHNOLOGY COMMERCIALIZATION



Striper Solutions LLC maintains and promotes relationships with technology partners, providing referrals and links to our Ecosystem partners through collaborations and the [associates](#) page on our website



THE PROBLEM:

FCC COMPLIANCE

STRIPER CURRENTLY SEES MANY PROMISING STEM/R&D COMPANIES STRUGGLE TO COMMERCIALIZE THEIR GROUNDBREAKING TECHNOLOGIES DUE TO A LACK OF AWARENESS AND UNDERSTANDING OF CRITICAL REGULATORY REQUIREMENTS

Most STEM-related products contain electronics that fall under Federal Communications Commission (FCC)

- These regulations require product testing to show compliance

Accepted data for compliance testing shows the most common failure is electromagnetic compatibility (EMC)

- 97% of medical products fail first-pass testing
- 50% to 90% of *all* products fail first-pass and subsequent testing

Underserved and/or undercapitalized communities are at a particular disadvantage because:

- The regulatory rules and design methods for EMC compliance are complex and require expertise typically only available to well-capitalized and experienced corporations
- Testing costs many thousands of dollars. Multiple tests to resolve EMC issues can be beyond available resources.



GROWTH ACCELERATOR PLAN

STRIPER WILL BE A CATALYST FOR SUCCESSFUL STEM/R&D COMMERCIALIZATION BY EDUCATING DEVELOPERS AND PROVIDING ECOSYSTEM RESOURCES TO MEET FCC REQUIREMENTS, RESULTING IN STREAMLINED, LOWER COST TECHNOLOGY DEVELOPMENT



FCC COMPLIANCE

The following root cause issues have been identified by Striper Solutions LLC as the root-cause of EMC compliance test failures:



1. Lack of awareness and misinterpretation regulations due to regulation complexity, including the integration of non-compliant modules for Wi-Fi, Bluetooth, etc.
2. STEM/R&D teams are centered on specific technology development and lack sufficient knowledge about emc principals and design practices
3. Increasing circuit complexity and density resulting in unanticipated interactions in the designs
4. Inadequate pre-compliance testing during development
5. Limited access to emc expertise, tools, and equipment

HOW THE PROBLEM OF FCC COMPLIANCE WILL BE ADDRESSED BY THE GROWTH ACCELERATOR PLAN

Stage One:

Addressing root-cause items 1 and 2 by demystifying regulatory complexity through education

Stage Two:

Addressing root-cause items 3 through 5 by working with targeted partners to develop programs and equipment for early design simulation and pre-compliance testing

STAGE ONE PLAN

STAGE ONE FUNDS WOULD BE USED TO EXPAND AND ENHANCE AND ENHANCE STRIPER'S EXISTING ECOSYSTEM SUPPORT BY CREATING TARGETED TECHNICAL INFORMATION, IMPROVING THE WEB PRESENCE, AND EXPANDING THE ASSOCIATE NETWORK



EDUCATE

Develop free educational materials targeted at root cause issues of FCC compliance failures



COMMUNICATE

Improve web presence and target small STEM/R&D developers with informational materials



COLLABORATE

Develop and expand relationships with Ecosystem partners providing training and testing



STAGE ONE RESOURCE DEPLOYMENT

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EDUCATE



A TECHNICAL WRITING SPECIALIST FOR:

- The development of educational materials designed to simplify and explain FCC regulations and their impact on STEM/R&D product development
- The development of educational materials designed to improve the knowledge and understanding of EMC design principals and design practices
- The development of abbreviated technical materials for trade journals, online services, etc.

COMMUNICATE



A WEB SPECIALIST TO:

- Improve the web presence and availability of online educational materials and associate links
- Target online technical, trade and social organizations, posting articles to inform STEM/R&D developers
- Improve website Search Engine Optimization (SEO) so targeted audience can find materials

COLLABORATE



Expand the associate network into the following areas to prepare for Stage Two by researching, contacting, and establishing a relationship with:

- Partners providing EMC training for developers
- Partners providing EMC design modeling resources
- EMC test houses providing pre-compliance resources
- EMC pre-compliance test equipment suppliers

STAGE ONE CHALLENGES

There are hundreds of FCC regulations for electromagnetic compatibility, how will you distill this information into educational materials that simplify the process?

- By contacting EMC test facilities to understand the most critical areas of test failure
- By concentrating on providing simplified information for regulations and design mitigation in those critical areas

How will you contact STEM/R&D developers to distribute the educational information?

- Sending materials directly to technology developers (Direct Traffic) was ruled out since it requires market research data that is hard to find, and the cost is beyond the scope of the Growth Accelerator Plan.
- By using website SEO and marketing techniques to drive inbound 'organic traffic' to the technical information and associate links
- By targeting technical and social media websites with appropriate articles, driving traffic to the educational materials and associate links

How will you measure success?

- Using website analytics showing traffic to the technical information and associates. This will also be used to improve methods for increasing organic traffic
- By measuring referral traffic from and to Ecosystem partners



BROADENING THE ECOSYSTEM

Current working relationships

- As a product development consulting company, Striper Solutions LLC helps customers resolve issues during the product commercialization process. This often involves direct relationships with other Ecosystem organizations providing engineering services, product testing, or regulatory Agencies providing product certification.
- It is important to maintain and grow these relationships to provide customers with the services they need for successful product launches

Example: A customer is developing an autonomous cleaning robot and needs assistance during safety certification

- Striper provides the interface between the customer's engineering department, the outside safety engineer, and the regulatory Agency, ensuring safe designs, compliance with standards, and appropriate documentation for product certification

Our Associates

- In recent years, Striper has recognized the importance of partners in product commercialization. We have dedicated space on the Striper Solutions LLC website to support our [Associates](#) –companies and organizations we work with on an ongoing basis
- We provide our Associates with an area to describe their business and links to their direct services



BUILDING TOWARD GAFC STAGE TWO

THE VISION FOR STAGE TWO IS THE DEVELOPMENT AND DEPLOYMENT OF COST-EFFECTIVE RESOURCES FOR EMC ANALYSIS AND PRE-TEST OF DESIGNS, LEADING TO A HIGHER FIRST-PASS EMC CERTIFICATION RATE



The role for future Ecosystem

- Once technology developers gain the knowledge to meet EMC regulations, they will need resources for design and pre-test before moving to product certification
- Future partners will provide the support for cost-effective EMC resources needed to accomplish successful simulation and regulatory pre-testing

Future Ecosystem partners:

- Companies providing EMC training for design engineers
- Companies providing EMC design simulation analysis
- Test facilities providing EMC pre-testing
- Companies supplying or renting EMC pre-test equipment

How future partners compliment the contestant in the ecosystem

- Targeted partnerships will provide valued assets to Striper Solutions LLC customers, supporting product development and successful commercialization