Peer-to-Peer Network Forum:
Emerging Technology Due Diligence

Summary

Conexus Indiana and Heartland Ventures held a Peer-to-Peer Network Forum on Wednesday, May 26, 2021. The peer discussion explored and collected feedback on the concept of Conexus and Heartland working together to provide Indiana advanced manufacturing and logistics (AML) firms with enhanced knowledge, influence, and access to emerging technologies in Industry 4.0. Seven organizations participated in the peer discussion.

Heartland Ventures is a venture capital firm that exclusively invests in technology relevant to its Midwest corporate investors, most of whom are manufacturers and logistics. Heartland was looking to engage with the Indiana AML ecosystem to understand perspectives on how companies find, vet, and eventually adopt, emerging technologies. Heartland's own technology due diligence spans a range of startup solutions and is much more extensive than the limited number within their investment portfolio.

Hannah Wexner, Heartland's associate director of community development, gave a brief introduction to Heartland's investment strategy as well as a peek into its pipeline of technology startups. This was followed by a recent investment example. Heartland invested in a startup company, called Pico MES, which has now launched a pilot project in Elkhart with an original equipment manufacturer (OEM).

Sneak peek into Heartland's technology pipeline

STRONGARM TECH — IoT-enabled wearables and sensing technologies to predict and prevent injuries in the industrial workplace.

KARGO — Smart loading dock sensor platform verifies all incoming and outgoing freight, aggregating data to efficiently manage dock operations, switch out suppliers and understand material flow in real time
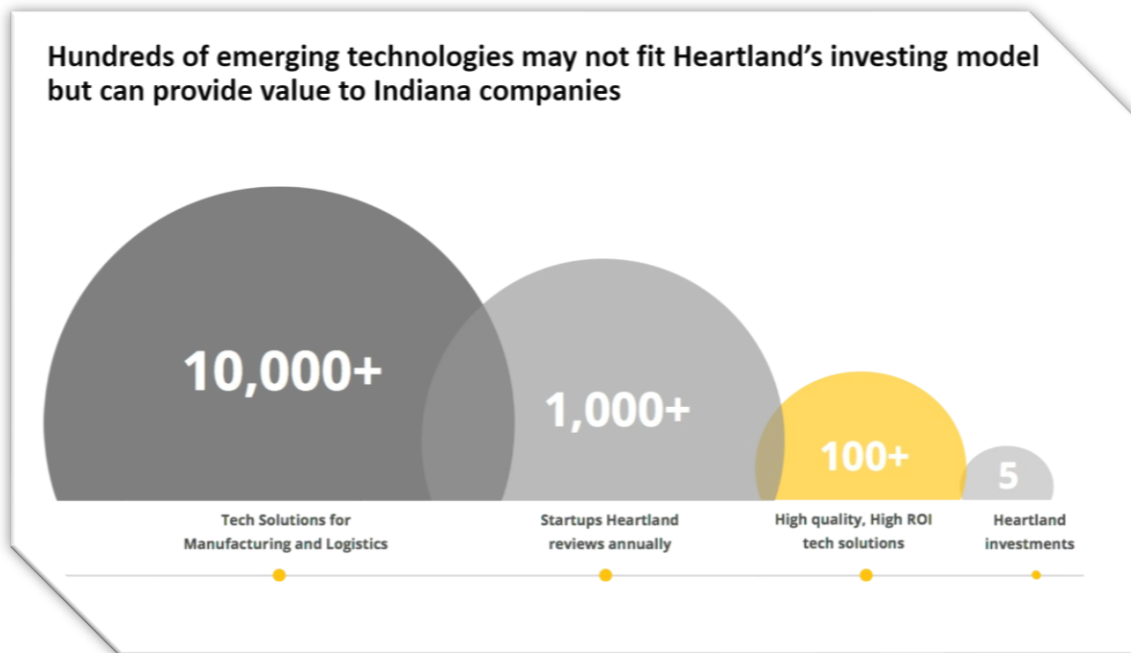
B (BidOps) — BidOps sourcing enablement software, driving results by getting better quotes faster.

Pico MES — Manufacturing analytics software for factory and machinery control

Pico MES' target customers are SMEs (<500 employees and revenue between $30-$100 million), which is very much representative of Indiana's advanced manufacturing and logistics ecosystem. Heartland's due diligence on the startup company found that SME manufacturers lose money due to errors at each manufacturing station, but often do not have the tools – particularly the software infrastructure – to collect data and error proof operations. The startup company offers a station-by-station approach to collect, understand, and measure manufacturing and logistics metrics at a granular level. The use-cases for AML are error proofing repetitive processes, factory and machinery control, and digital work instructions integrated with station tools and processes.

Pico MES is one example of hundreds, if not thousands, of emerging technology solutions for small-to-medium advanced manufacturing and logistics companies. This fact makes it difficult for a single company to decide which technologies are disruptive and valuable. In particular, it is difficult to decide which solutions will have an immediate impact on ROI, will integrate with legacy systems, are cost-efficient, and much more. In essence, it is nearly impossible for a single AML company to figure out which emerging technology solutions are 'high quality.' While Heartland only invests in a handful of technologies every year, such as Pico MES, there are dozens more solutions that are high quality and relevant to AML companies in Indiana.

Hundreds of emerging technologies may not fit Heartland's investing model but can provide value to Indiana companies

10,000+ — Tech Solutions for Manufacturing and Logistics

1,000+ — Startups Heartland reviews annually

100+ — High quality, High ROI tech solutions

5 — Heartland investments

To finish the presentation, Heartland suggested a possible solution for emerging technology due diligence: a "Tech Tool." It could be shared with the Conexus Network and be based on due diligence from Heartland's database of vetted technologies.

Recommendations for a Solution

The consensus of the peer group is that everyone is trying to find a better process to find and vet new technologies and a "Tech Tool" could be valuable in certain circumstances.

The key recommendations from the peer group for Conexus and Heartland in building a tool were:
- The database of technology solutions should be searchable by "pain points." For example: equipment downtime, productivity, worker safety, data collection and tracking, supply chain integration and transparency.
- Companies could use the online database of emerging technologies as a valuable data point when looking to solve a particular business problem.
- Companies could use the tool as part of the State of Indiana's Manufacturing Readiness Grants program, where manufacturers can submit a smart manufacturing project and acquire grant funding.
- The technology solutions in the database should be particularly relevant for small enterprises, rather than large enterprises.

Some of the challenges mentioned by peers in creating a useful tool were:
- Small companies, particularly manufacturers, where processes are rapidly evolving, may be interested in materials, applications, and new processes as opposed to generic operations tech solutions. A collection of technologies included in the tool should go beyond generalized 'systems' tech and include some emphasis on key areas like materials and process advancements.
- Static databases on websites are always a challenge. Some companies felt that the most effective approach for exposure to new and emerging technologies has historically been through live conversations with other manufacturing and logistics companies.

Next Steps

Heartland and Conexus are incorporating feedback and perspective from the discussion in ongoing dialogue, which may culminate in a prototype tool for Indiana AMLs.

Get Involved

Conexus Indiana's Peer-to-Peer Network Platform is an invite-only forum for Indiana manufacturers and logistics companies to share knowledge and best practices about advanced technology they have utilized or are seriously considering. Ultimately, we hope these conversations will drive greater adoption of advanced technologies by allowing a variety of stakeholders to learn about technology among engaged and informed peers. Reach out to Conexus Indiana to get involved.