
# Pythia

Predictive Modelling for Economic Development

CETI | Canadian Entrepreneurial Training Initiative

# Problem

**Complexity** due to **intertwined** technologies.

Growing **masses of data** from a growing **number of sources**.

**Mixing** of existing technologies to solve **new problems**.

Different **rates of adoption** and commercialization in the **component** technologies.

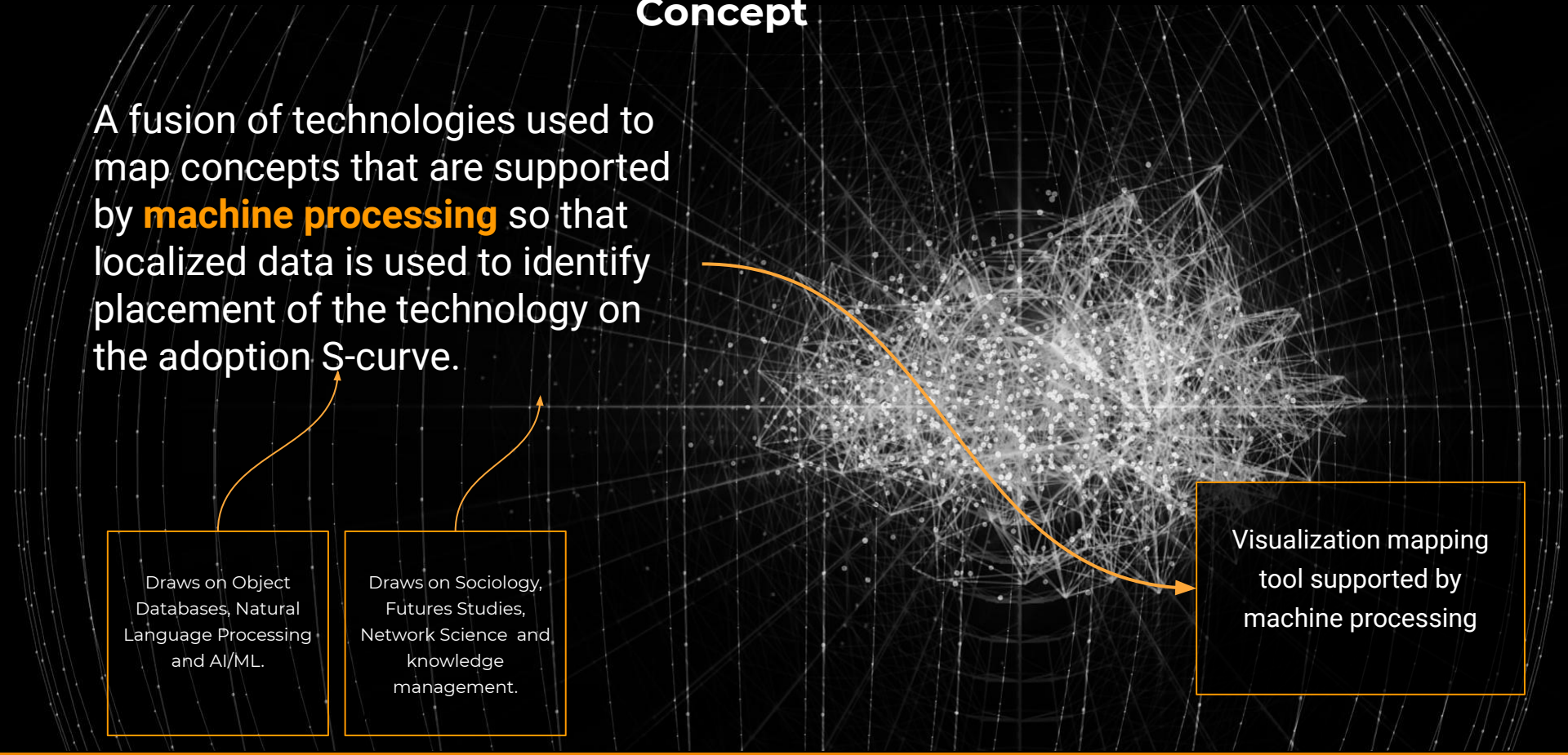
## We need to be right at the correct time with the appropriate resources

To do that, we need:

1. To structure technologies and concepts so they can be manipulated, monitored and analyzed.
2. To integrate expert opinions and facts from diverse sources drawn from large masses of data on a regular basis.
3. To visualize complex data in a simple and timely format.

# Concept

A fusion of technologies used to map concepts that are supported by **machine processing** so that localized data is used to identify placement of the technology on the adoption S-curve.



Draws on Object Databases, Natural Language Processing and AI/ML.

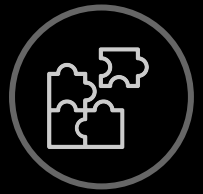
Draws on Sociology, Futures Studies, Network Science and knowledge management.

Visualization mapping tool supported by machine processing

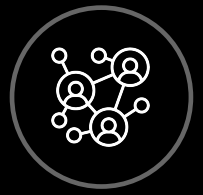
# Solution


Pythia will help shrink the *Observe–Orient–Decide–Act* loop enabling organizations to be more responsive.

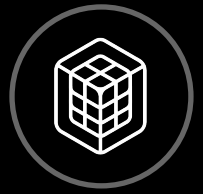
## Concepts, Relationships, Clusters and Engagement



**Concepts -** Are discrete ideas for which we analyze the STEPE [Social, Technological, Economic, Political, Environmental] facets, along with the three types of innovation, [sustaining, efficiency, market creating], its maturity [Technical Readiness ]



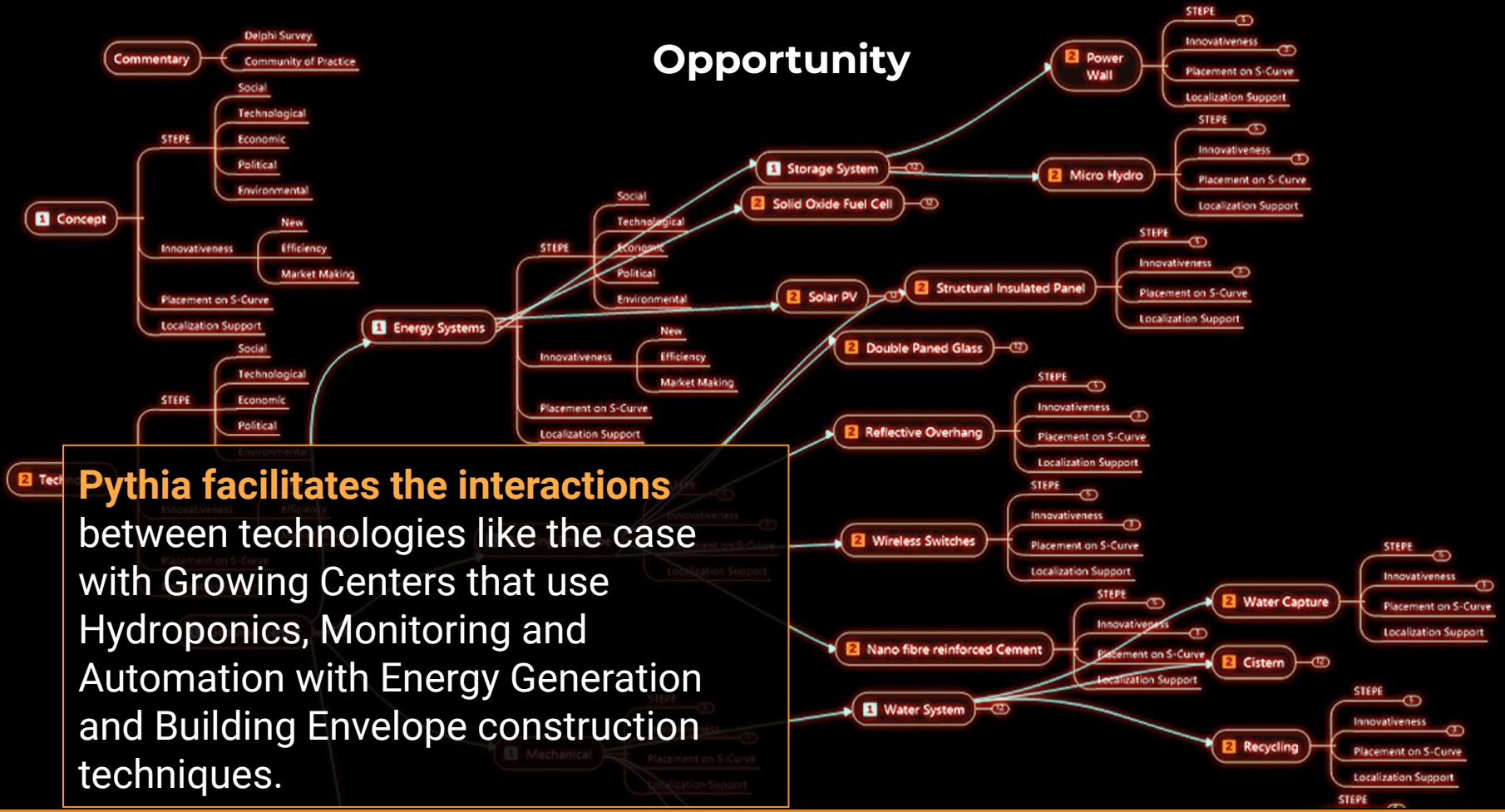
**Relationships** - Describe the linkages between concepts and clusters implemented as tags to allow many to many relationships that can be visualized depending on the point of view of the analyst.



**Cluster -** Allow groupings of concepts and clusters to form more complex systems. It forms set behavior in that a cluster is composed-of concepts or smaller clusters.

**Engagement -** Forms the types of engagement with a specific concept or cluster [Delphi Survey, Futures Wheel, Futures Cone, Scenarios, Horizon Scanning, Visioning].

# Opportunity




**Pythia facilitates the interactions** between technologies like the case with Growing Centers that use Hydroponics, Monitoring and Automation with Energy Generation and Building Envelope construction techniques.

# Key Personnel

**E v. Stackelberg, MSc-IS**

Entrepreneur with over thirty-years experience in technology and management. He has held senior management positions with Anethum Corporation (2001-2016), M5 Airborne Solutions Inc (2015-2016), 24Seven-Inc. (2003-2006), Chimera Visions Corporation (2001), Cogent Technologies Corporation (1990 – 2001) and worked extensively with databases, software design and innovation for clients in industry, academia and government.

**P. Tang, BSc**

Entrepreneur experienced in the development of Social Network Systems and demonstrated by ZanQ, a platform linking entrepreneurs that uses Natural Language Processing to sift through large databases and find relevant publications.

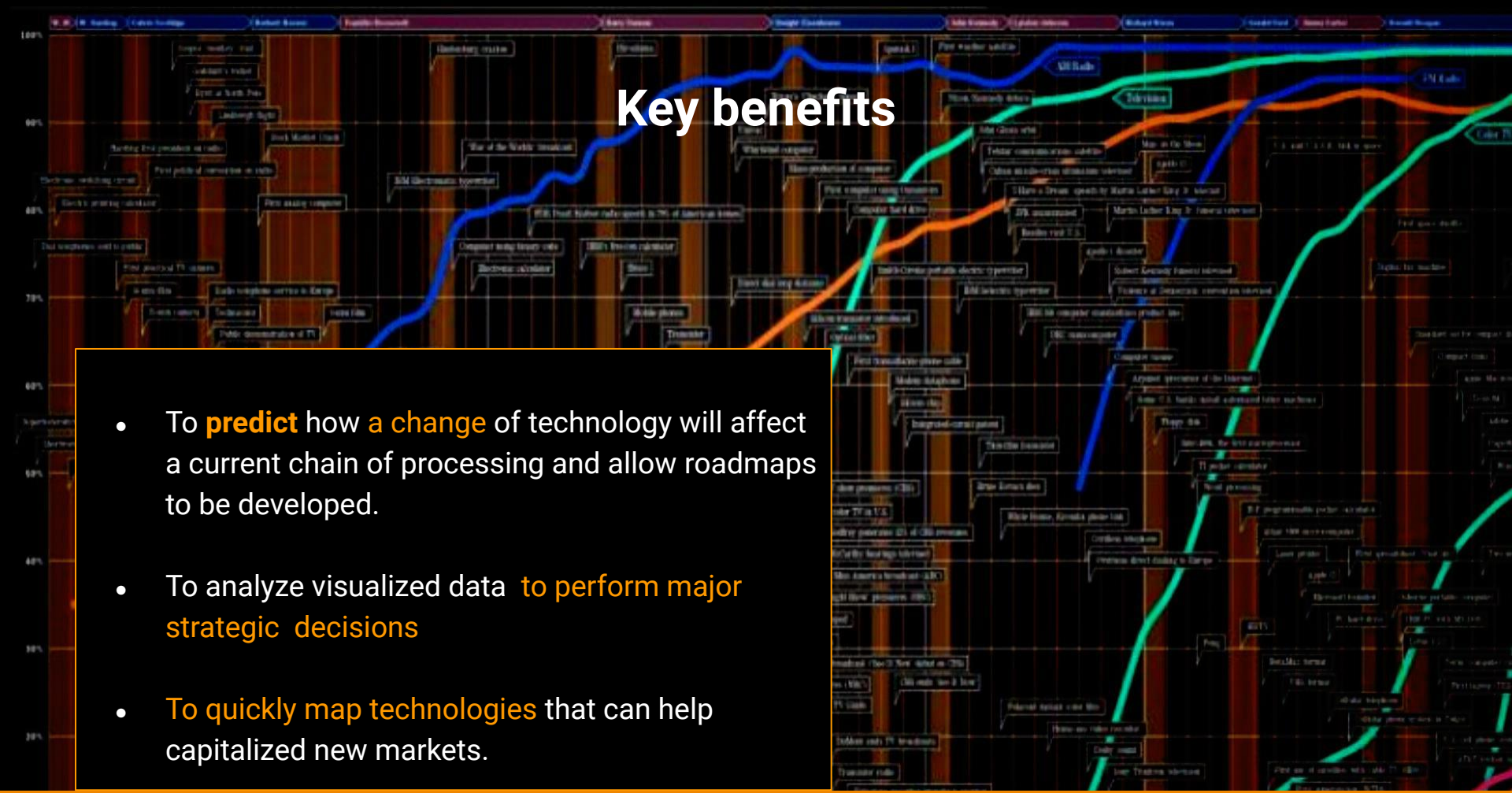
**L. Barreto**

Designer and animator for mixed realities. Experience building and managing teams to produce television series, films, art exhibitions, live events, video games, advertising, and online experiences. Broad experience in leading teams that merged storytelling with digital and traditional art techniques such as illustration, 2D and 3D animation, stop motion, motion graphics, video games, VFX, projection mapping, set design, VR installations in Canada, USA, Spain, England, France and Colombia

**Grow Cycle Solutions Inc**. Founded in 2016, is an early stage company created to design, develop and operate Controlled Indoor Agriculture facilities that include co-generation, hydroponics, control, monitoring and analytical systems to optimize operations. Our niche expertise is focused on; Multidisciplinary research and development; Technology and process integration; Agricultural development; Custom and commercial development. As part of their applied research in generating our designs we are also involved in an ongoing development of our Innovation Network which includes Partners with synergistic products and services in Agricultural and Aquaculture Development, IT/IM, Digital and Transmedia, Distributed Energy Resources and Strategic Intent. Our existing presence is in Canada and continue to pursue expansion into USA, India, New Zealand and Columbia.

The **Canadian Entrepreneurial Training Initiative** (CETI) is an Alberta non-profit incorporated June 2017 with a mandate to provide training and economic development throughout Western Canada. We use a social contract to outline the expectations that define our culture and we attempt to foster diversity. While much of our attention is directed to a younger audience (16-30) we strive to make our programming available to all that are prepared to follow the social contract and we attempt to help them through early stages to Series A. Since incorporation we have explored projects with collaboration partners in UK, USA, India, Australia, New Zealand and Columbia in attempts to allow Western Canadians to become more familiar with global business opportunities and cultures. Our website is https://ceti-ltd.ca/.

# Key benefits



- To **predict** how a change of technology will affect a current chain of processing and allow roadmaps to be developed.
- To analyze visualized data to perform major strategic decisions
- To quickly map technologies that can help capitalized new markets.

# What we're looking for?


Seed stage investment of $420,000 to facilitate the develop and support of **three early stage** customers interested in the complex interactions of technology.

# Risk

- **Technology** - as a new approach to predictive modeling there are significant unknowns related to what we are building. We manage this by using a spiral iterative development approach.
- **Financial** - insufficient financial resources for a complex product. Managed by minimizing outlays using Mitacs and Government funding where possible.
- **Change** - Managed as part of an engagement platform demonstrating positive results.

# Reward

- Better understanding of complex technology issues in a dynamic environment.
- Application for Economic Development and the impact of Innovation on the System.
- Identifying and highlighting the influence of Sustaining, Efficiency, Market-Creating Innovations.
- Use by investment funds to increase Return On Investment (ROI)

# Contact

**Eric v. Stackelberg, MSc-IS**
Eric.vonstackelberg@ceti-ltd.ca