



Technology Landscaping  
Business Case: Big Data  
Scouting for Heavy Truck  
Manufacturer  
Mobility Innovation Vetting





HEAVY TRUCK  
MANUFACTURER HALVES  
MOBILITY INNOVATION  
VETTING TIMELINE;  
SIMULTANEOUSLY SAVES 30%  
IN COSTS

**The worldwide revenue from global heavy truck manufacturers exceeds \$101 billion.** A global leader in heavy truck manufacturing, recognizing the imminent disruption its sector faces from autonomous vehicles, began a practice to encourage and field pitches from mobility startups and other technology innovation companies.

**Throughout the first year** of this “invitational,” the manufacturer collected hundreds of ideas which they then distributed throughout the company to evaluate.

**Yield = Zero; After dozens of hours of evaluation time, not a single idea was deemed worth further pursuit. The entire lot of pitches was set aside.**

## CLIENT PROCESS

Yield = Zero: This passive approach to finding innovative solutions was time-consuming and ineffective to attempt again.



**In Year Two, the manufacturer changed its tact,** deciding to instead begin in-house, soliciting the needs of its various departments. The company used these identified needs to begin its search for solutions in the marketplace. Its initial, manually-intensive and also arduous process flowed as follows:

- Team of 5 internal technology scouts were utilized to conduct the research and vetting
- Scouts used Google as the primary mechanism with which to conduct searches
- Supplemented research with 59 other secondary search/research tools
- After a manual preliminary vetting process, only two of the solutions identified were deemed worthy of advancing



**Putting Big Data to the test with Ezassi's proprietary Technology Landscaping.** Using the same needs assessment, the truck manufacturer decided to innovate upon its process of innovation with Ezassi.

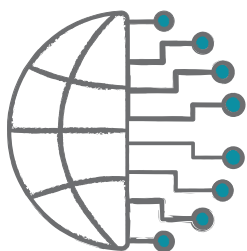
Ezassi's Technology Landscaping software is a powerful big data tool that does for technology research what search engines have done for the Internet. Its highly robust results deliver the "A, B, C's" of research intelligence all in one: artificial intelligence, business intelligence, and competitive intelligence through both machine learning and natural language processing. Its index contains technology research, development, and mining data from over 40 million global sources, well beyond traditional search engines. Its sources include technology and innovation conferences, publications (such as scientific and technology briefs and journals), news coverages, trademarks, grant offerings and awards, patent filings, web monitorings, and relevant organizations.



ENTER EZASSI

BIG DATA TECHNOLOGY  
SCOUTING WITH  
TECHNOLOGY  
LANDSCAPING: WHERE  
INNOVATION MEETS  
DISRUPTION

YIELD = SUCCESS



## MINING MORE THAN 40 MILLION DATA SOURCES

The data Technology Landscaping analyzes and dives deeply into includes:

- 19,908,388 source documents
- 31,350,295 experts
- 2,349,899 organizations
- 224,570,134 topics



## IN LESS THAN 30 SECONDS

The Technology Landscaping user, the “scout,” can obtain – in less than 30 seconds – real-time query results that might otherwise take days or weeks to find...if found at all. Queries can be further refined, drilled-down into for deeper analysis or used to surface a broader universe of innovations and ideas the company may not have even known existed.





## THE CHALLENGE

Advancements and efficiencies in autonomous driving and other emerging technologies to improve the performance, mitigate risks, and enhance the development of our autonomous-driven heavy truck vehicles.

**In the case of the truck manufacturer, they used an internally-identified innovation need – a “challenge” – and used Ezassi’s Technology Landscaping software** to see what it could surface. They developed a Challenge Statement to define what they were attempting to unearth: “We are looking for advancements and efficiencies in autonomous driving and other emerging technologies to improve the performance, mitigate risks, and enhance the development of our autonomous-driven heavy truck vehicles, either through partnering with or acquiring qualified companies. This challenge should also help to identify subject matter experts and other potential solvers who can possibly help us — collaboratively or internally – develop technologies ourselves.” It further articulated aspects of its requirements, such as sourcing cover all geographies and categories of suppliers (startups and other companies). The expected deliverables should include: the list identified solutions, the contact details of the solution provider, available related technical references (i.e. communication, list industrial references and/or demonstration tests), and available information on the provider.



# Suggested Results Cluster

Ezassi started its test by simply querying for trucking and autonomous. Honeycombed suggested search terms can be added to refine the query or noted for completely new queries.

The screenshot displays the Ezassi Technology Landscaping interface. At the top, the Ezassi logo is on the left, and a search bar with the text 'trucking' is on the right. Below the search bar, there are tabs for 'Summary', 'Organizations', 'Records', 'Data Analytics', and 'Map'. The 'Summary' tab is selected.

On the left side, there is a 'SEARCH TERMS' section with input fields for 'trucking' and 'autonomous', each followed by '+ OR (e.g. synonym)' and '+ AND (e.g. new search term)'. Below this is a 'Suggested Terms' section with a grid of terms including 'Navistar', 'Vehicle Platooning', 'Robotics', 'Fully Electric', 'American Truck Driver', 'Market Analysis', 'Uber', 'Tesla Semi', 'Testing Self-Driving', 'Self-Driving Car Tech', 'Connected Truck', 'Behavior Planning Module', 'Company', 'Delivery Robots', 'Global Innovation', 'Tech Ceos', and 'Uber Announced'.

The main content area is divided into three sections:

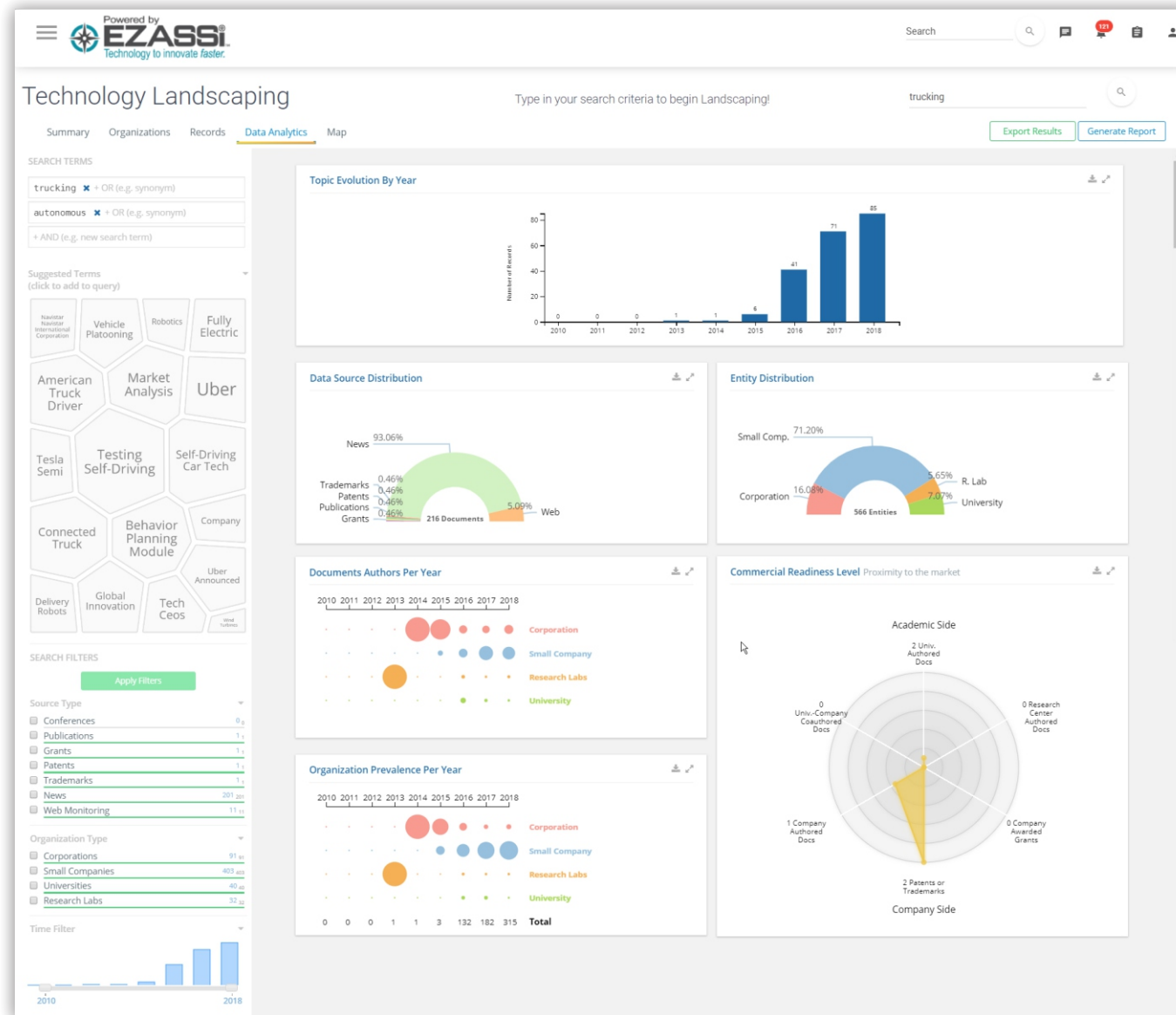
- Which are the top organizations worldwide?**  
Top 4 of 566 organizations:
  - General Motors: 172.5 score | records 8
  - Waymo LLC: 104.5 score | records 37
  - Google: 93.3 score | records 33
  - NHTSA: 83.1 score | records 11A link 'View all 566 organizations' is at the bottom.
- Where are the main hubs located?**  
Locations with most organizations: A world map with orange dots indicating hubs. A button 'Show Real Data' is overlaid on the map. Below the map is a link 'Expand the map to zoom in with real data'.
- What are the most relevant records?**  
Top 2 of 216 records:
  - Insurance Truck Studies Effects of Autonomous Driving on Trucking Industry**  
News Article | August 14, 2018  
Site: marketersmedia.com  
Insurance Truck (InsuranceTruck.com), a California-based truck insurance wholesaler for independent commercial agents, have been analyzing the effects of autonomous driving. — Representatives of Insurance Truck (InsuranceTruck.com), a California-based truck insurance wholesaler for independent commercial agents, have been analyzing recent studies regarding the effects of autonomous driving on the trucking industry, with the current consensus suggesting fleet management – or “platooning” – will most likely be the sector influenced by t...
  - Autonomous trucking heats up as Volvo unveils electric truck with no cab**



# Emerging Technology Findings

Technology Landscaping confirms that this is an emerging technology topic over the past three years, as evidenced by sources produced in 2016, almost doubling in 2017 and increasing further in 2018.

Technology Landscaping further reveals that this topic is currently dominated by small companies, having moved out of the research labs.





# THE DRILL-DOWN REVEAL

Automated drill-down of  
start-ups, small  
companies and other  
organizations...




**Technology Scouting looked at the 12 organizations listed and drilled into the profiles.** As scouts went through the organizations' profiles, they looked for results fitting their requirements. By-organization drill-downs revealed – at a glance – many of the details the company was looking for, but which would have otherwise taken hours to find.

One company's reveal, via Ezassi's Technology Landscaping software, showed the following:

- Two patents filed
- One authored scientific journal publication
- Seven grants filed



# Drilling into the detail records of Advanced Scientific Concepts' profile.



Search


122

## Technology Landscaping

Type in your search criteria to begin Landscaping!

autonomous

**Profile** Collaboration Social Map Data Insights

**Advanced Scientific Concepts, Inc.**  
www.asc3d.com  
Santa Barbara, CA, United States


SEARCH TERMS

autonomous ☒ + OR (e.g. synonym)

trucking ☒ + OR (e.g. synonym)

+ AND (e.g. new search term)

SEARCH FILTERS

Time filter 

Source Type

<input checked="" type="checkbox"/> Conferences	2	<input checked="" type="checkbox"/> Publications	1	<input checked="" type="checkbox"/> Grants	7
<input checked="" type="checkbox"/> Patents	2	<input checked="" type="checkbox"/> Trademarks	0	<input checked="" type="checkbox"/> News	1
<input checked="" type="checkbox"/> Web Monitoring	0	<input checked="" type="checkbox"/> Products	0		

[View full profile](#) **13 Records**

**Flash Ladar Collision Avoidance System**

Patent

Advanced Scientific Concepts, Inc. | Date: 2015-06-16

A vehicular collision avoidance system comprising a system controller, pulsed laser transmitter, a number of independent ladar sensor units, a cabling infrastructure, internal memory, a scene processor, and a data communications port is presented herein. The described invention is capable of developing a 3-D scene, and

Target Identification

3D Focal Plane Arrays

Planetary Entry

Fabricated Multiple Commercial

Unmanned Aerial Vehicles Uav

Landing

3D Cameras Suited

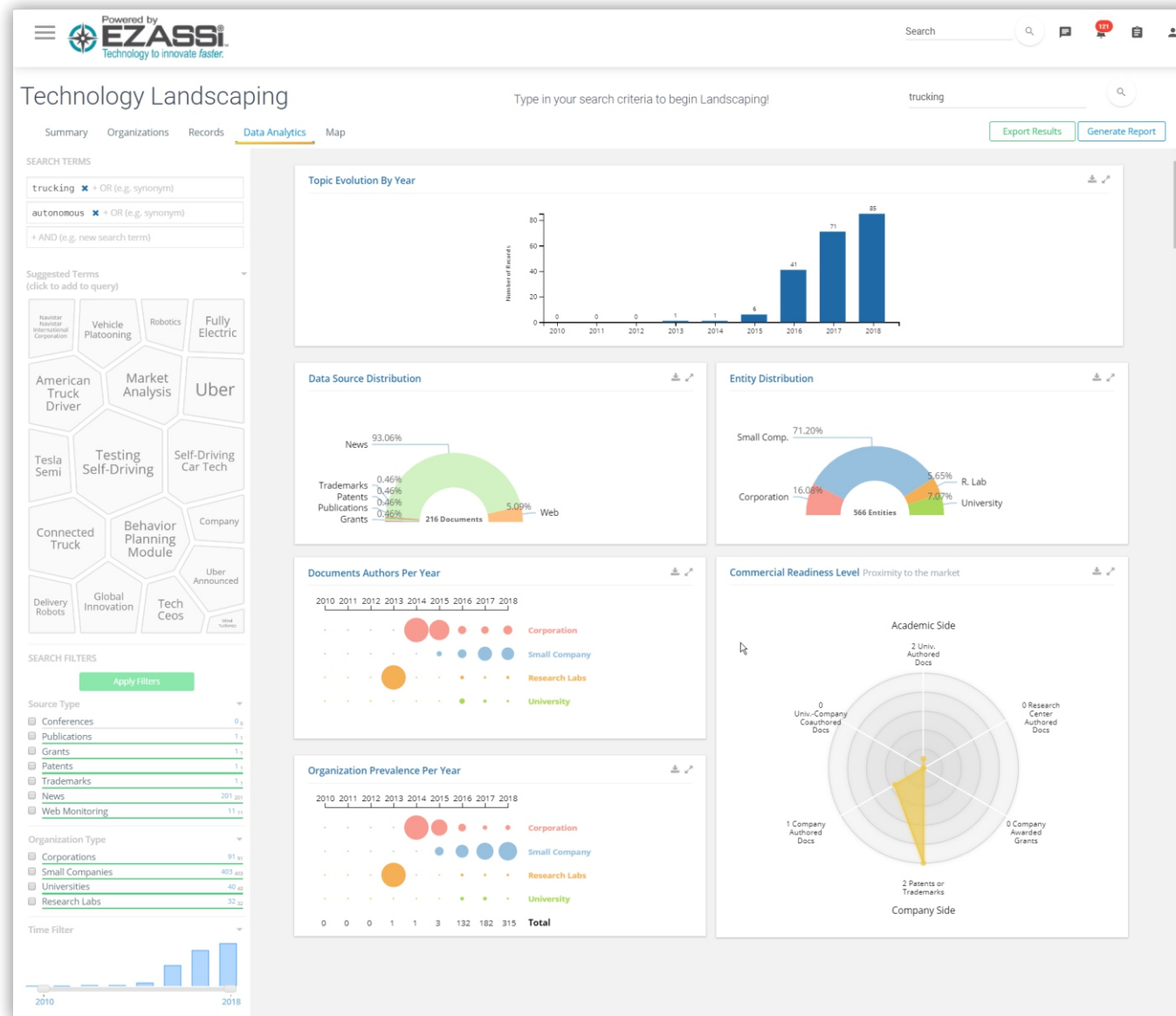
Readout Integrated Circuit Connected

Autonomously Piloted Vehicles



# Technology Trends and Adjacencies

In addition to the honeycombed suggested keyword terms, the Technology Landscaping tool also examines the recency and rise of terms related to the initial query, providing a means to identify trending and adjacent technology; and the ability to compare the expertise of organizations on those findings and others.





**What had taken six weeks of manhour time with the previous manual process, to identify and evaluate potential technologies or technology partners, was now taking mere days.**

Ezassi, continued with the drill down scouting process, reviewing and capturing relevant results in order to analyze and vet more thoroughly beyond the initial identification phase. New queries were conducted, unearthing more useful information and development partners to approach. With the advanced technology features, Ezassi's Technology Landscaping did the heavy lifting of identifying valuable adjacencies for the scouting team. Each new query, each click-through to a new suggested term or dashboard tab took less than a minute to complete, despite the voluminous size of the Technology Landscaping's total database.

## DISRUPTING INNOVATION THROUGH ADJACENT TECHNOLOGY DISCOVERY

A lidar technology disruption. Several adjacent technologies were uncovered as part of the final scouting solution that had not been discovered by the heavy truck manufacturer's internal scouting team.

# SIGNIFICANT IMPACT AND OUTCOMES

Measurable impact on  
the bottom line that really  
hit the point home.



## The results of the Ezassi Technology

**Landscaping** proven approach surprised the truck manufacturer. The process was not only faster but also easier and more stimulating for the scouts to do their job. More importantly of all was the measurable impact on the bottom line that really hit the point home:

- Time Savings: **50% saved** (3 weeks versus 6 weeks)
- Pre-Qualified Yield (Organizations that might meet the company's challenge requirements): **748% more identified** (408 versus 55)
- Qualified Yield (Organizations that were vetted as meeting the challenge requirements): **2,100% increase** (107 versus 5)
- Acquisition Targets (Qualified organizations the company may target for acquisition): **4**
- Adjacencies: **14 new viable paths** to explore that the company wasn't aware of before
- Solvers Identified: **29 individuals** with whom the company can crowdsource solutions
- Research Savings Cost: **31% lower** (\$11,000 versus \$15,960)



### **Since experiencing so much success**

with Ezassi's platform, the heavy truck manufacturer has since transferred its innovation development and technology scouting process company-wide to the Ezassi approach. The company has also put into play a plan to pursue a minimum of 24 Big Data Scouting projects per year. The intention of this plan is to constantly feed the innovation pipeline and expedite the concept-to-creation lifecycle, reducing it by at least one-half the amount of time.

## GO-FORWARD APPLICATION

Ezassi's Big Data Scouting and Technology Landscaping software is now an integral part of this company's ability to remain competitive and innovative.