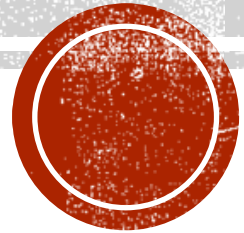
ROLE OF THE AI LITERATE CITIZEN



TOPICS TODAY

- What are we solving for
- Supply chain innovations
- Why do we care
- AI literacy
- Conclusion

Visionary | TEDx | CDO | Transformation Executive | Keynote Speaker | Board Member | Cancer Warrior | Entrepreneur

https://www.linkedin.com/in/melissa-drew/

- Working with Data since 1995 and AI technologies since 2004
- Founding member of Women Leaders in Data and AI
- Host Podcast ‘Impact of AI (& Data)’
- #34 (Top 100 Women in Supply Chain)
- Top 50 Thought Leaders to Follow in 2024

My views are my own and may not reflect those of my current employer

WHAT ARE WE TRYING TO SOLVE

Our goal is to have data but to have data at the right time when it will impact the decisions made in the organization. Understanding how to make that happen is critical to solving our business challenges.

In 2023, we globally created 120 zettabytes of data. We are no longer capable of synthesizing such large volumes of data in a timely manner.

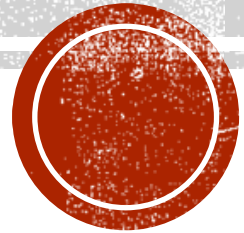
Unit	Size
1 Yottabyte	1,000 Zettabytes
1 Zettabyte	1,000 Exabytes
1 Exabyte	1,000 Petabytes
1 Petabyte	1,000 Terabytes
1 Terabyte	1,000 gigabytes

We also have Brontobytes and Geopbytes beyond Yottabyte

AI TECHNOLOGIES

Technology	Definition
Machine Learning	This increases the accuracy of predicting outcomes. Machine learning algorithms use historical (retrospective) data as input to predict new output values.
Deep Learning (Subset of Machine Learning)	Imitates how humans collect & synthesizes information to create meaningful information. From digital images, videos and other visual inputs — supports actions or make recommendations based on the information collected.
Natural Language Processing	Understand, interpret, and manipulate human language. Information and meaning with semantic cues such as words, signs, or images.
Neural Networks	Recognize relationships in a set of data that mimics the way the human brain operates. E.g., Data Patterns, Clustering Data, Learn, and Improve
Robotics Processing Automation (RPA)	Perform tasks done traditionally by human beings. Robots are widely used in such industries as automobile manufacture to perform simple repetitive tasks.
Computer Vision	Gain meaningful information from digital images, videos and other visual inputs and take actions or make recommendations based on that information.

SUPPLY CHAIN INNOVATION



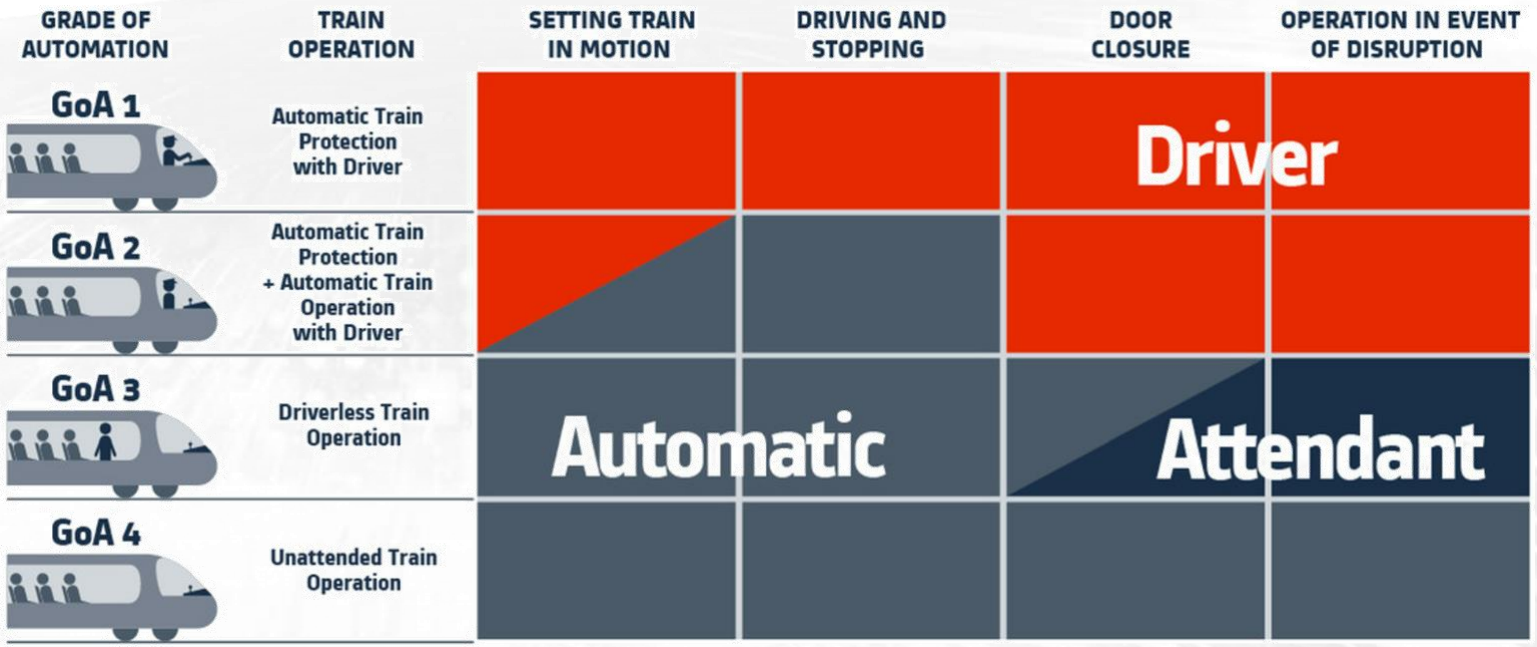
DRIVERLESS (UNMANNED) TRAINS

Allstom – Regional Routes (US)

- Operates on shared track
- Must share the path with other trains, cars, and pedestrians
- Trains need the ability to see ahead and around the track
- Train needs to be able to communicate and make decisions

The Fuxing Bullet Train (China)

- Launched in 2022 Winter Olympics – single route
- 350 miles per hour



TU SIMPLE AUTONOMOUS (LONG-HAUL) TRANSPORTATION

By 2030, it is projected that the N.A. will have 160,000 long-haul drivers short to meet growing demand. Tu Simple has developed an autonomous freight network (AFN), including software, cabs, and terminals across the United States—360-degree computer vision with HD camera, radar, and Lidar.

Their trucks utilize proprietary three-dimensional high-definition digital maps. These maps serve as a digital pathway for the **L4 self-driving trucks** to follow and support nearly all aspects of TuSimple's autonomous trucking system by statistically encoding predictive knowledge of the road environment accumulated over time to ensure optimal safety and efficiency.

OTHER EXAMPLES

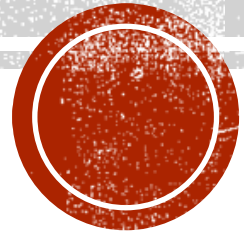
Zebra's logistics and supply chain AI solutions include SmartPack and SmartPack Trailer, which integrate hardware, software, and data analytics to provide real-time visibility into the loading process and increase efficiency. Specific benefits include optimizing space to ship less air and reduce operating costs, quicker and more efficient parcel processing reduced damage and loss, and improved worker safety.

Symbotic designs, builds and tests AI-powered robots that provide flexible manual or fully automated solutions based on a company's products, operational flow and customer needs. The company's SymBots leverage machine learning and vision algorithms to organize inventory in a way that ensures **all horizontal and vertical space is filled to the max.**

Acquired by UPS, Coyote Logistics uses various methods — including predictive analytics, AI, and machine learning — to pair customer shipment information with outside data (like real-time traffic and weather) to help shippers predict supply-chain issues, including delays, before they occur. As a result, they can make alternate plans for shipments to continue to arrive on time.

Using AI and machine learning, DataArt helps its clients track fleets, develop optimal routes, anticipate disruptions and organize workforces to meet production needs adequately. The company also offers real-time analysis of supply chain data as well as the synchronization of logistics processes and other key factors.

AI LITERACY



WHY DO WE CARE?

All those innovations are leveraging AI technologies that must be trained with data

- You helped to train ChatGPT 3.5 and 4.0 and other applications
- In the News (this week) OpenAI transcribed over a million hours of YouTube videos to train GPT-4 (You Tube not happy)
- Training data is not real-time or uses the most recent available data
- Humans write the algorithms, test the data, and determine if the training data is on target with the algorithm
- Experience data drifts, which occurs when the use of the algorithm drifts further away from the intent of the algorithm

AI LITERATE CITIZEN

“An AI-literate citizen is aware of what and how much data they create.

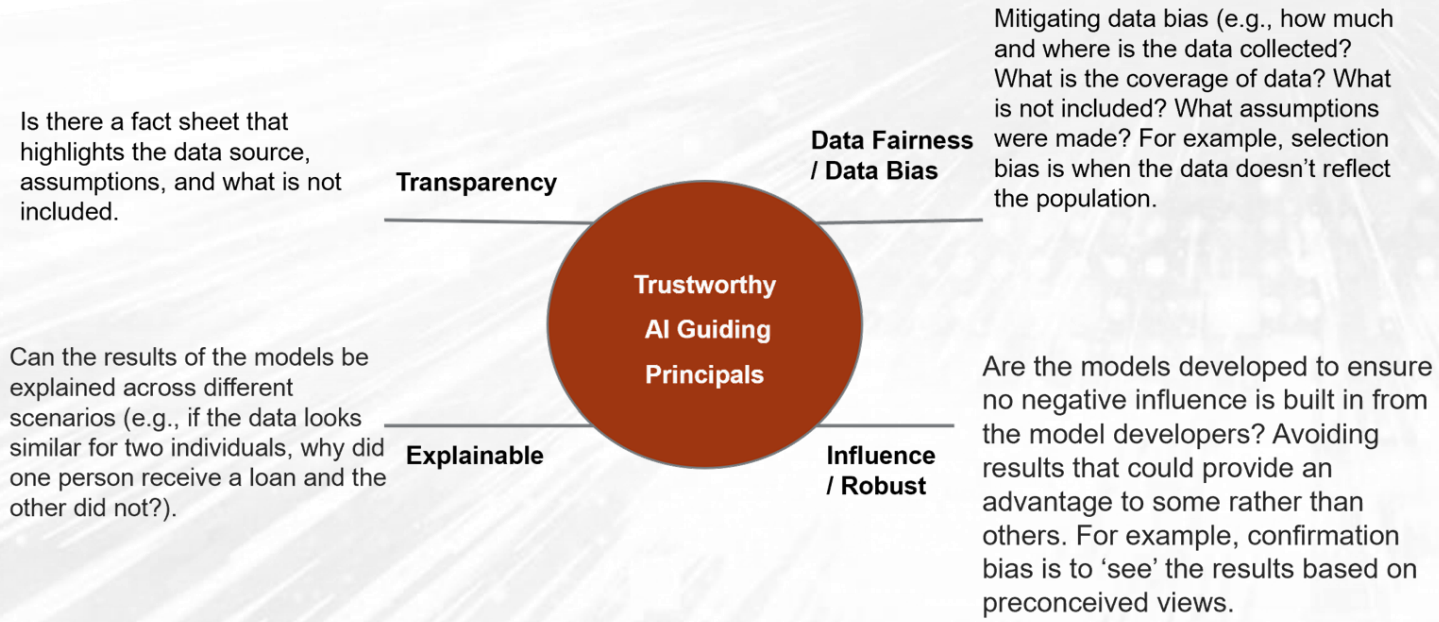
It is someone who understands when and how their (personal) data is being stored, shared, deleted, or sold to a third party.

An AI literate citizen feels confident in understanding how data is used in the products and services they consume.” Melissa Drew

There is no AI without Data.

CONCLUSION – IT STARTS WITH YOU

- No policies or regulations exist. When they do, they vary widely across each country.
- Companies like IBM and Deloitte have outlined what responsible AI should look like, but nothing holds suppliers accountable
- (in this news last week) Investment advisers pay $400K to settle charges of misleading statements regarding using artificial intelligence (AI) technology in their products.



More responsibility continues to be pushed to the consumer.

You must read the fine print, ask questions, and know where your data is or where it should be.