

The background is a deep blue gradient with a subtle pattern of white dots, resembling a starry night sky. Overlaid on this are several faint, white circular and semi-circular lines of varying thicknesses. Some of these lines have small white arrows indicating a clockwise direction. A prominent circular scale is visible on the left side, with numerical markings from 140 to 260 in increments of 10. The overall aesthetic is technical and futuristic.

BIG DATA IN 3D PRINTING

A BRIEF INTRODUCTION

3D PRINTING: THE DATA



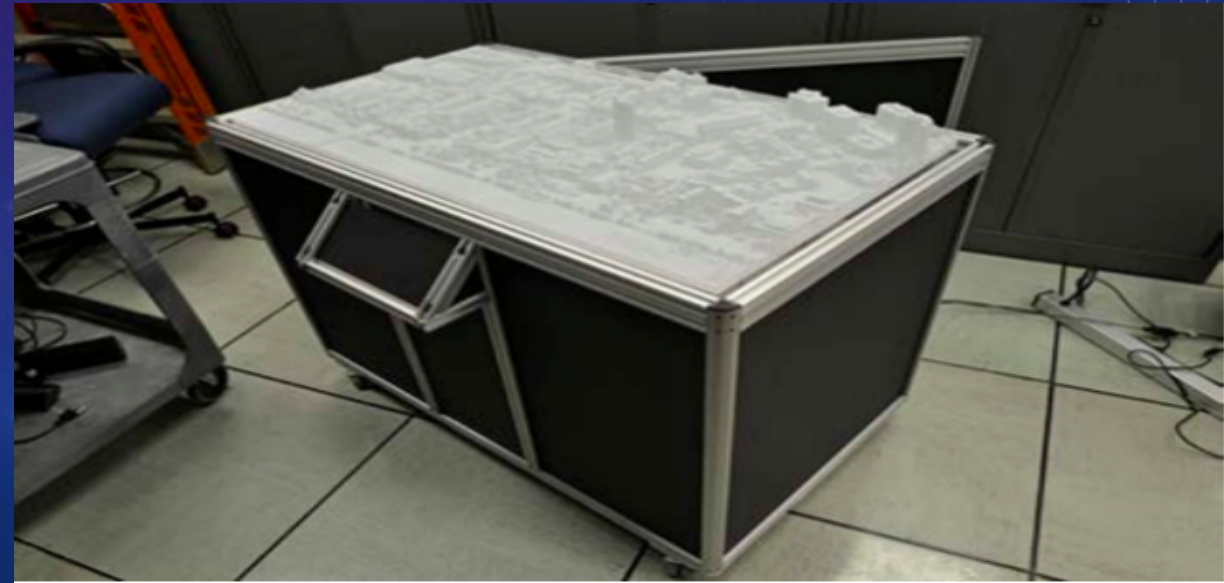
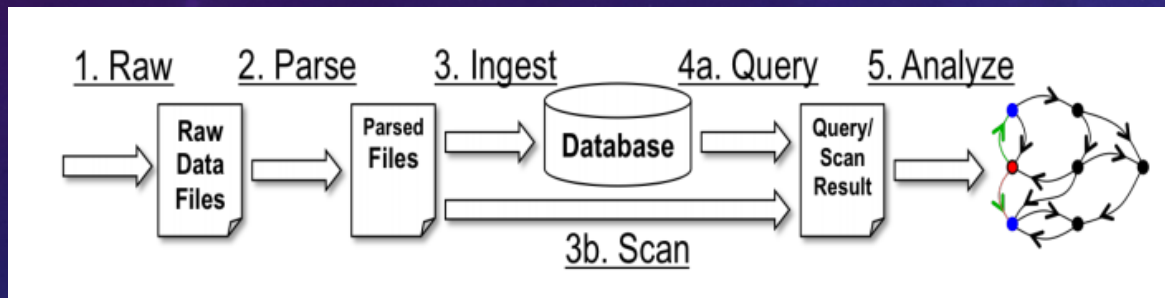
- 3D printing is growing really fast
- Spending to increase from \$1.6 billion to \$14 billion in 2018
- CAGR last 3 years was 33.8%

AN INTERDEPENDENT RELATIONSHIP

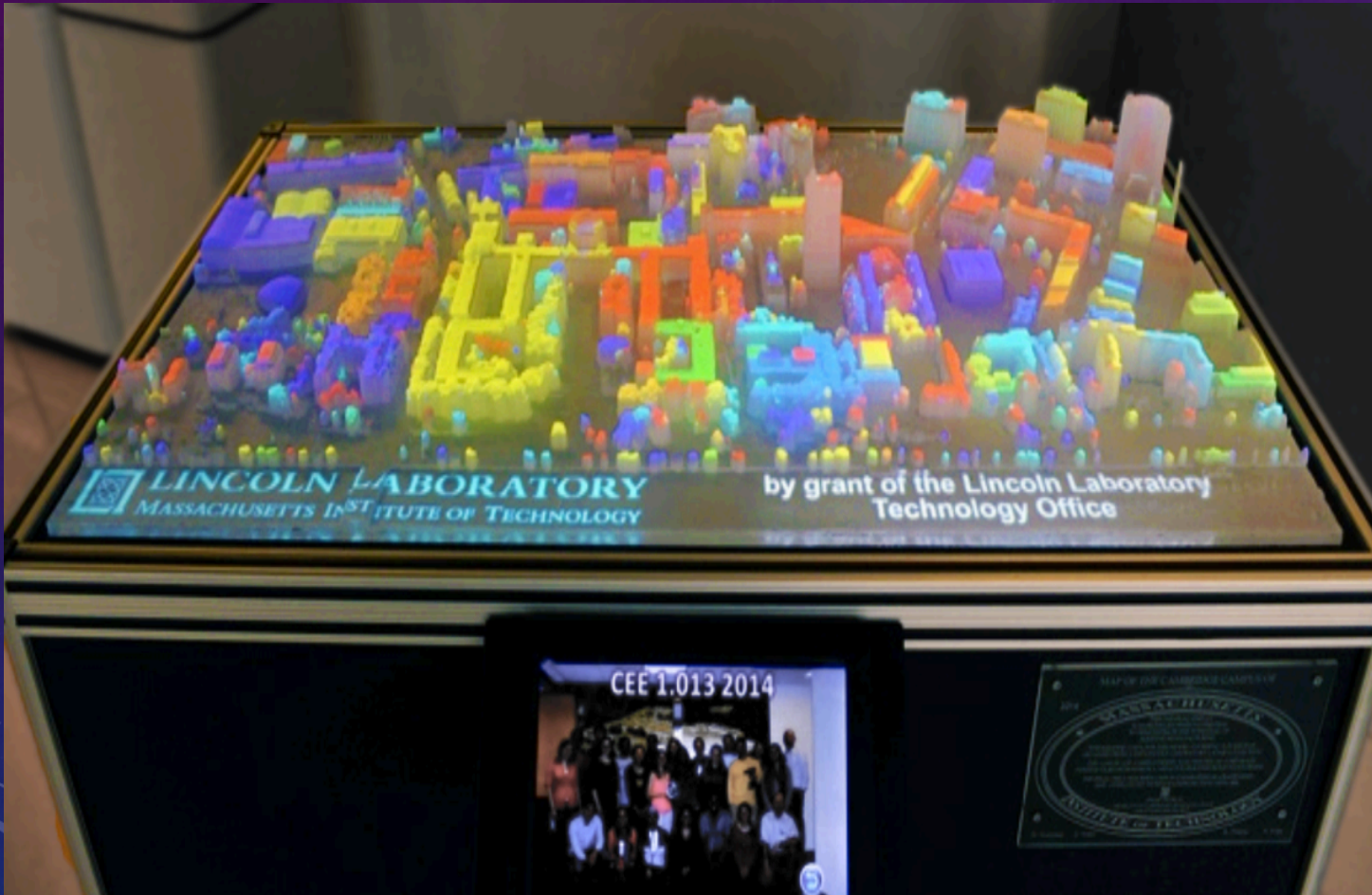
- DATA VISUALIZATION
- MANUFACTURING AND QUALITY ASSURANCE
- DATA STORAGE PRINTING

DATA VISUALIZATION: LUMINOCITY

MIT Researchers use 3D printing, Big Data, IOT to create enhanced visuals of campus



TWEETS BY TOPIC



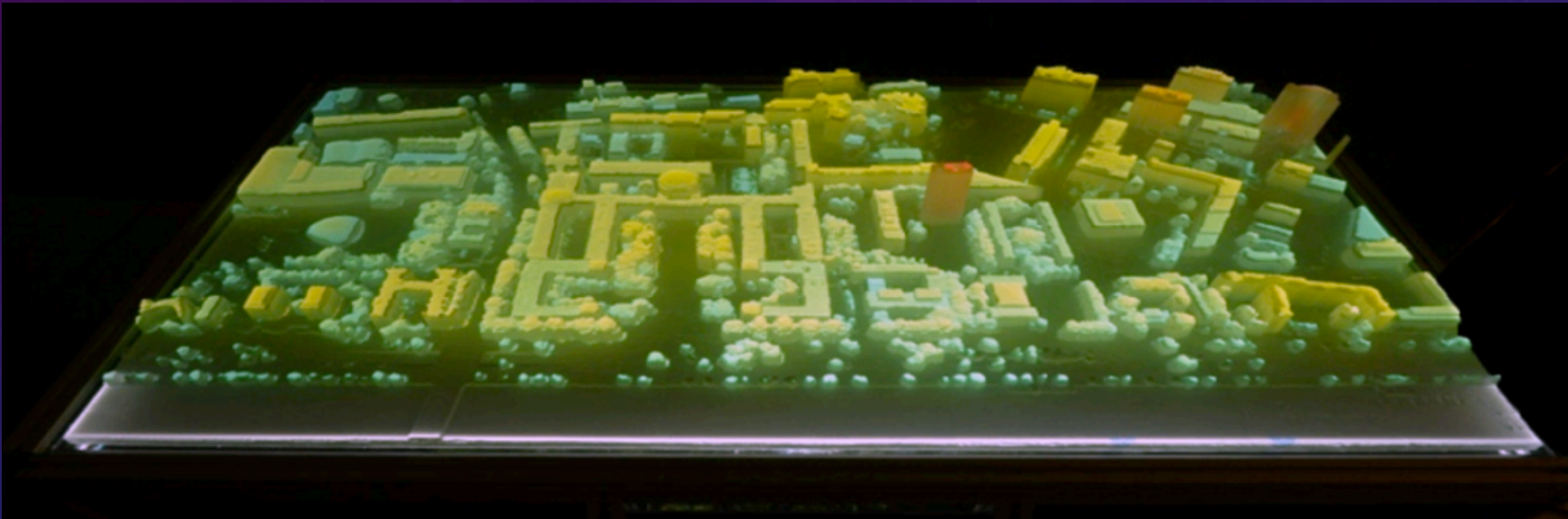
500 million tweets from
Decahose

Understand real time
movements

Gain patterns from topic
clustering and key-word
searches

FUTURE USES

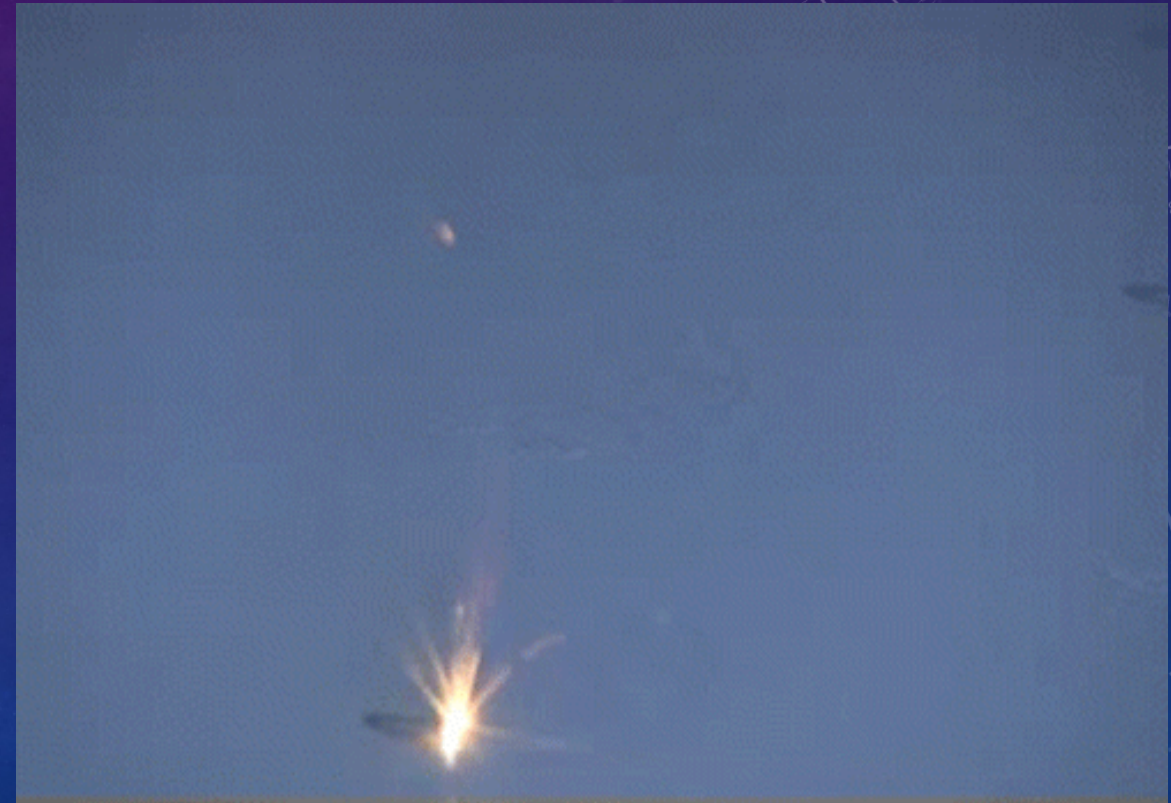
- Scale up model to entire cities and alleviate traffic hotspots in urban planning



- Design smart cities with emission information from IOT sensors

MANUFACTURING: GE AVIATION

- Complex parts require a lot of data
- Alignment error of even fraction of mm is dangerous
- *Big data will actively collect and analyze data to spot trouble*
- Data stored for back testing by engineers
- “in-process” inspection can increase production speed 25%



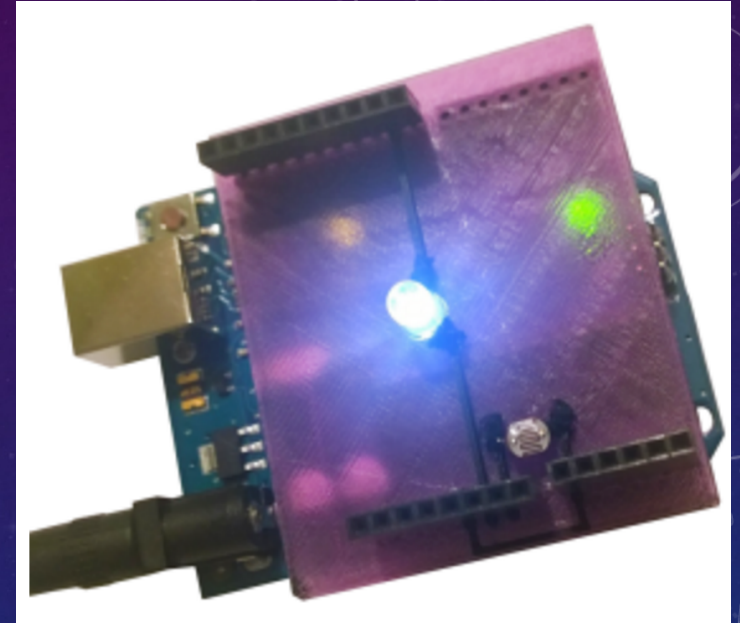
DATA STORAGE OF THE FUTURE

- 2.5 quintillion bytes of data everyday

Functionalize F-Electric: an electrically conductive filament

Carbomorph: Conductive material to build custom electronic designs

- Future lies in printing cheap and efficient Data Storage systems





QUESTIONS? THOUGHTS? IDEAS?