

DATA & the Real World



PRESENTED BY:
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Why Do We Care About DATA?

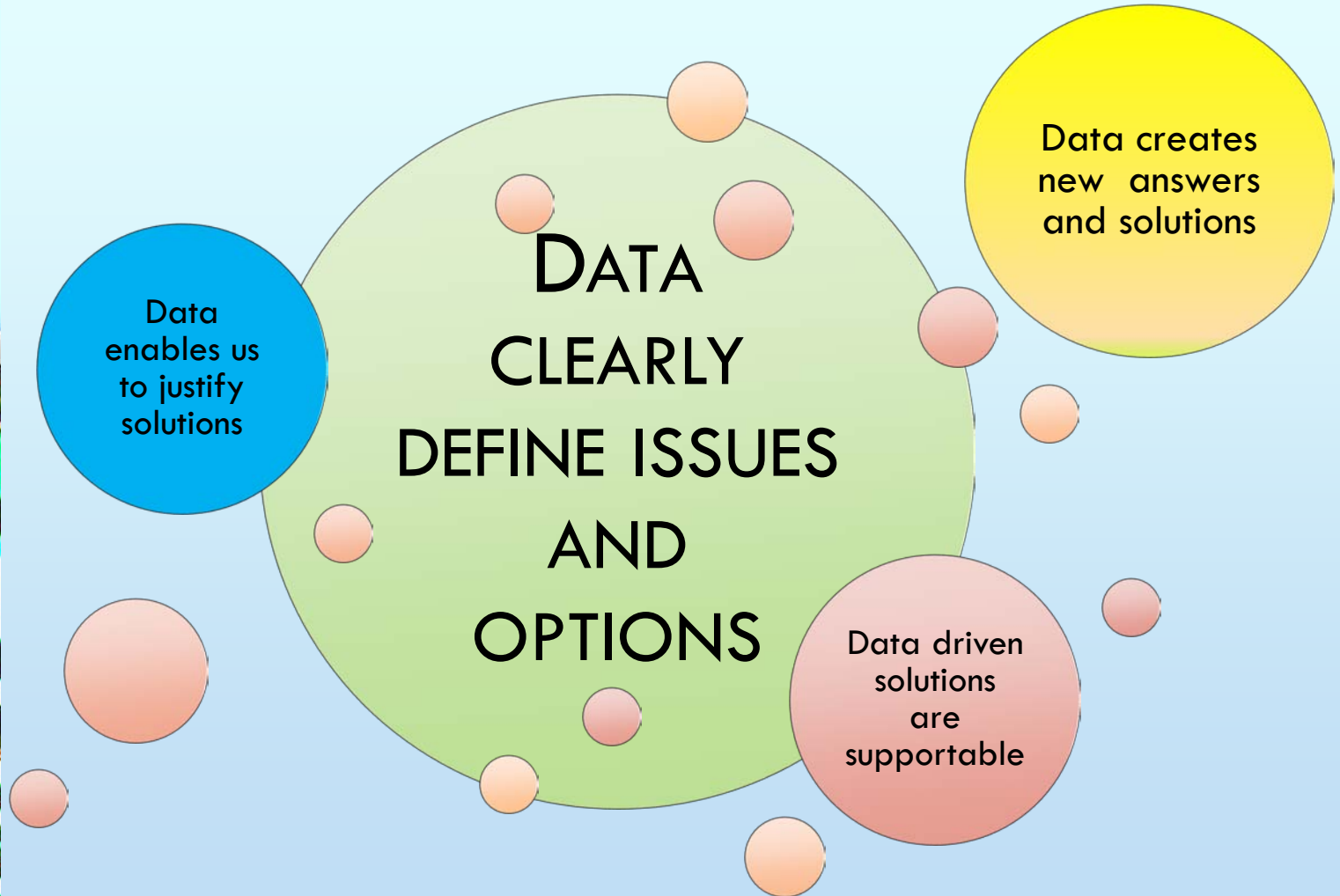
Top Data Management Issues

Data Systems

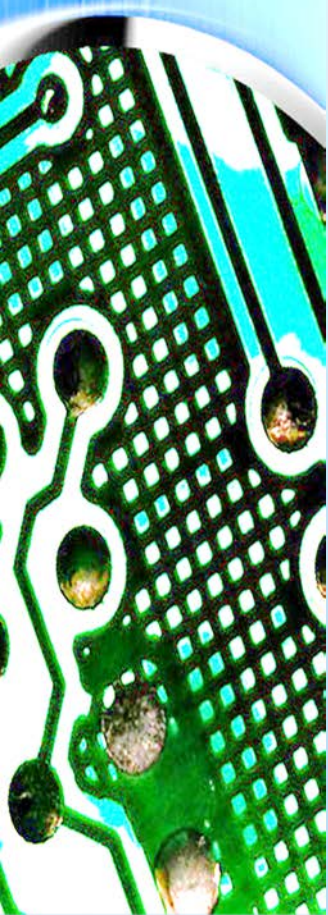
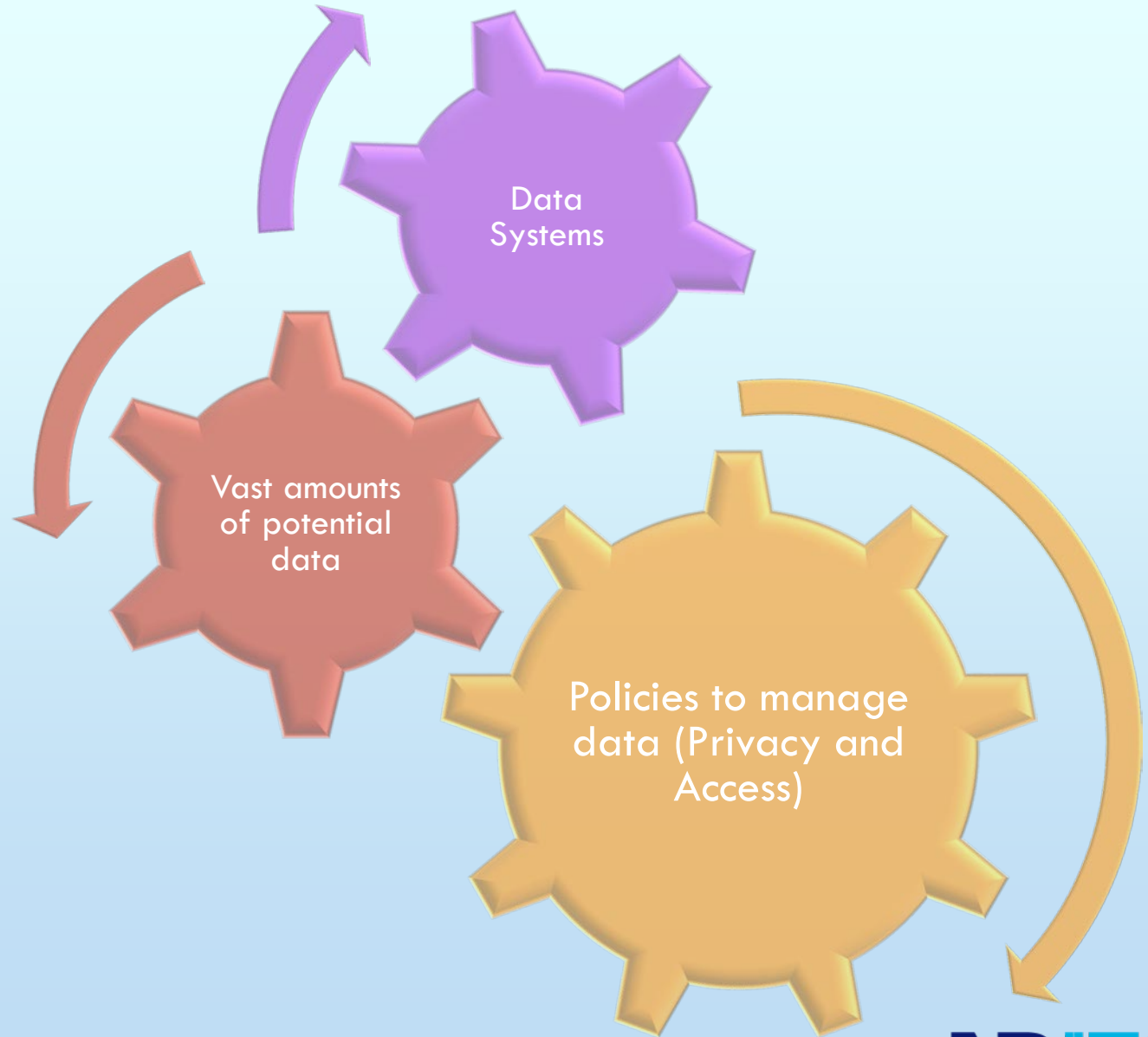
Real World Implications & Demands

Wrap-Up

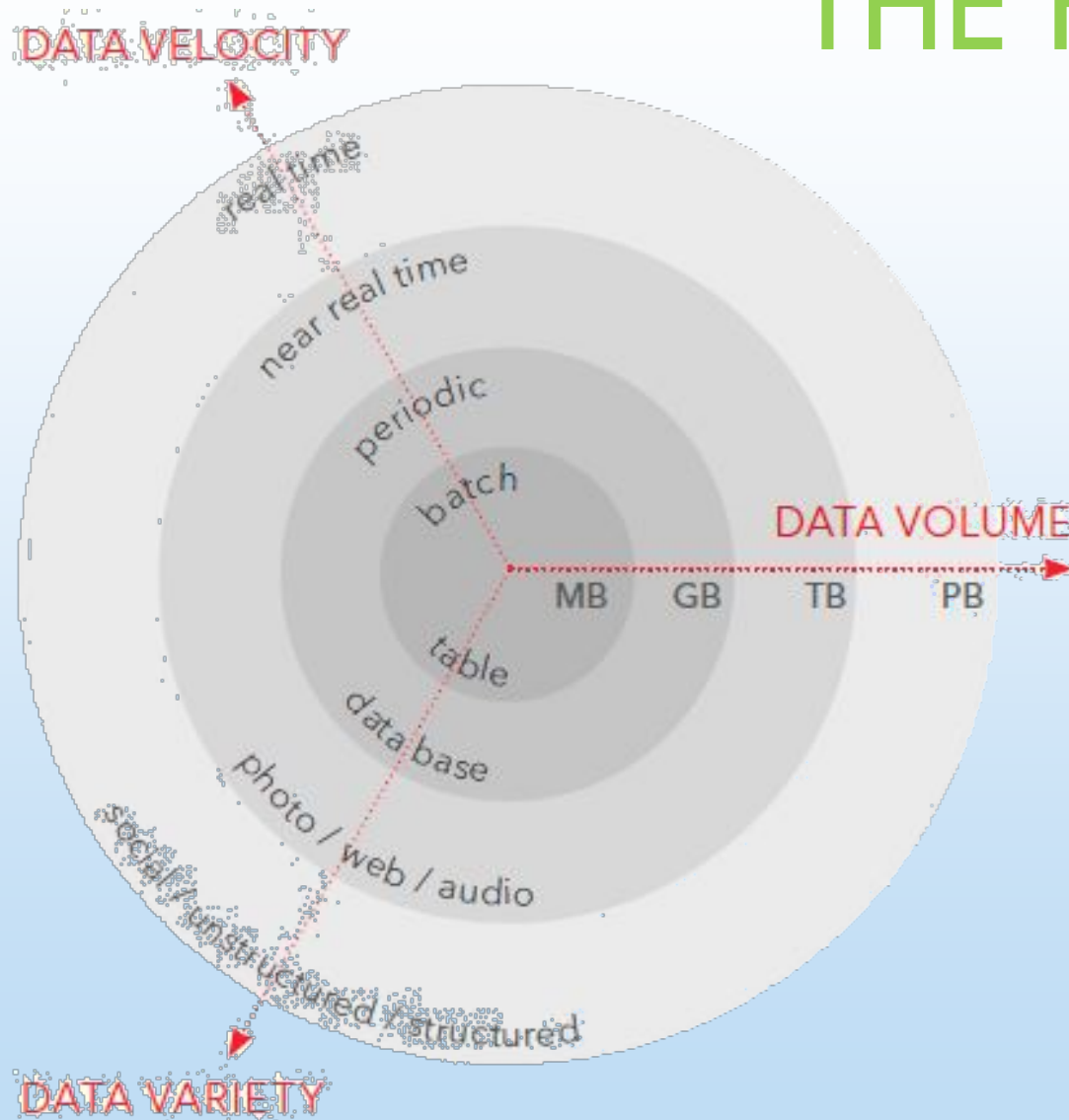
WHY DO WE CARE ABOUT DATA?



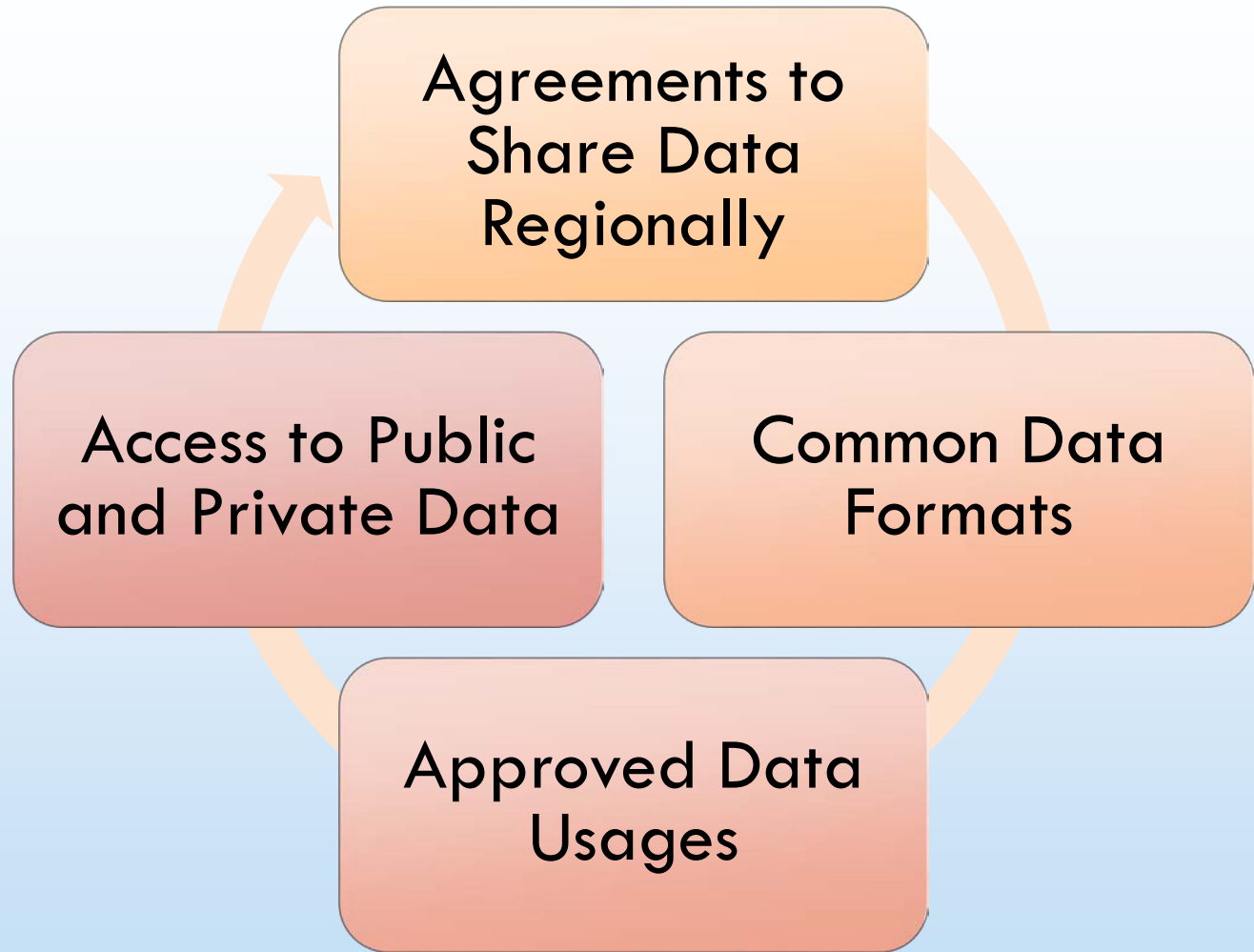
TOP DATA MANAGEMENT ISSUES



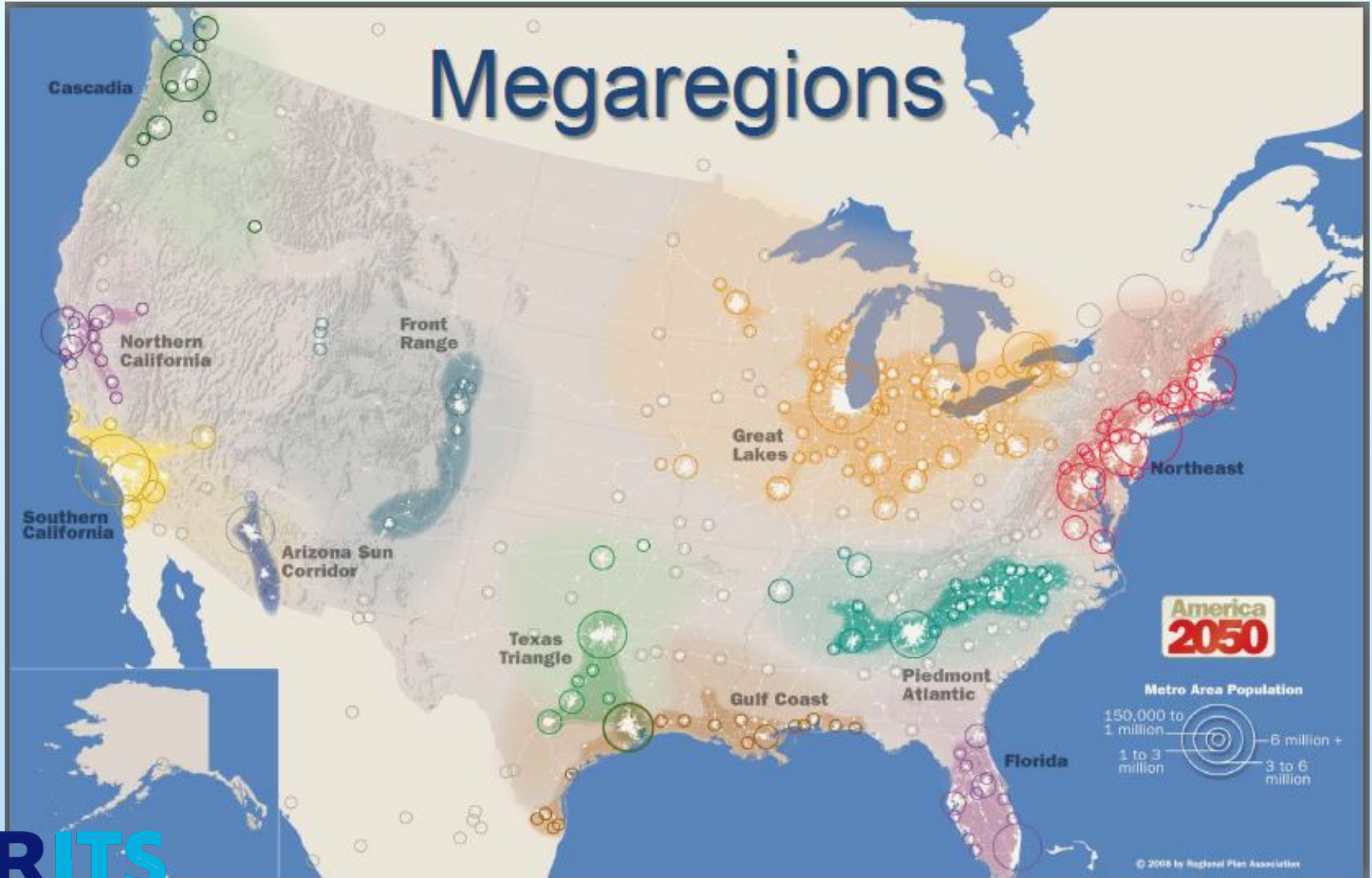
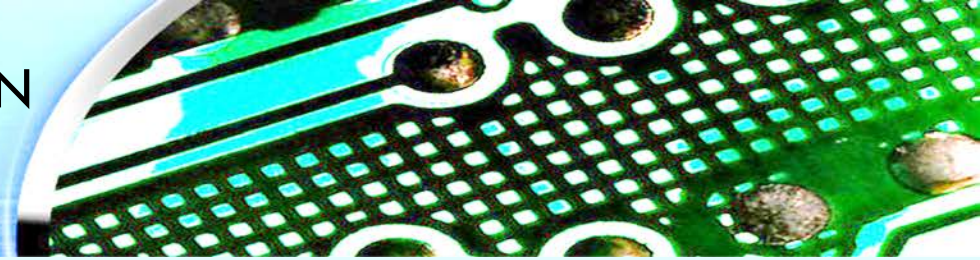
THE FIVE V'S



- Volume
- Velocity
- Variety
- Veracity
- Value



DATA POLICIES



DATA SYSTEMS - COLLECTION

Traditional
Sensors

IOT / Edge

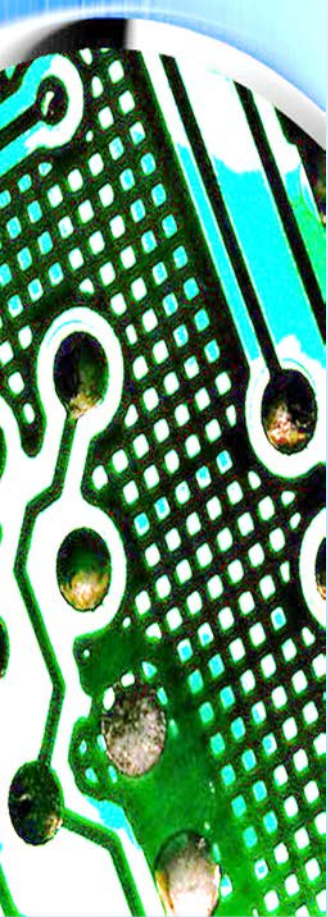
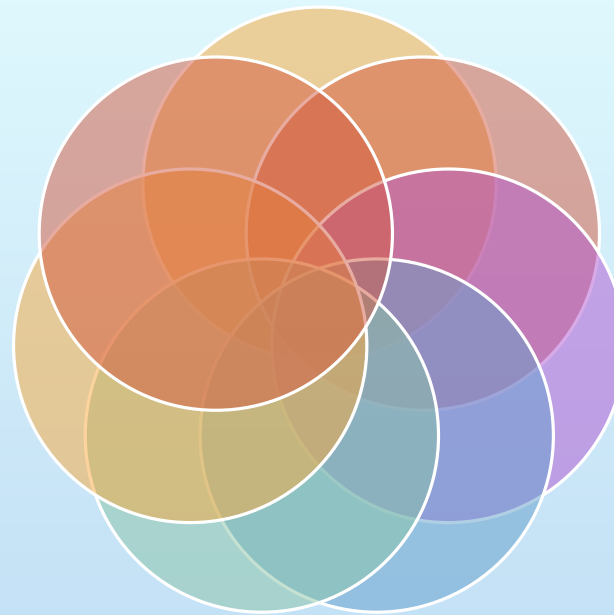
Cameras

Vehicle Based
(CV/CAV)

Wi-Fi /
Bluetooth

Emerging
Technologies

Radar /
Lidar



DATA SYSTEMS – TRANSPORT NETWORKS



Twisted
Copper
Pairs

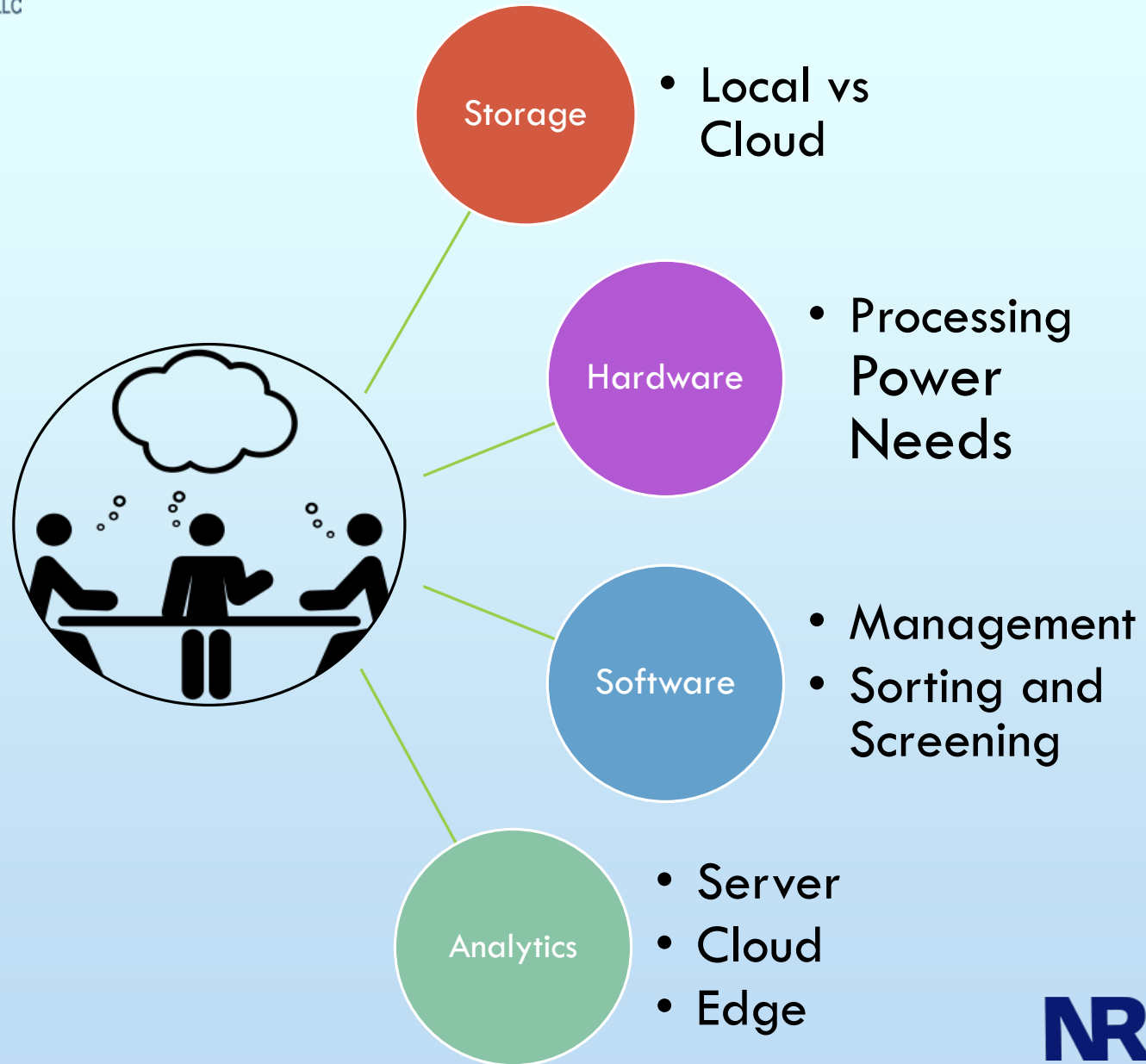
Fiber
Optic
Cables

Wireless

- Cellular
- Microwave
- Wi-Fi
- Bluetooth
- P2P Radios
- Satellite

Dedicated
Short
Range
Radio
(DSRC)

DATA SYSTEMS - USAGE



REAL WORLD IMPLICATIONS

Current Uses

- ITS
- Traffic Operations
- Active Monitoring

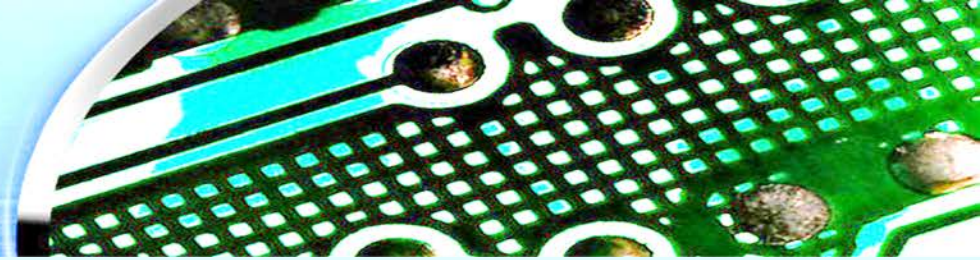
New Demands

- System Sharing
- Smart Cities
- C/A Vehicles
- TNC's

NEW DEMANDS - SHARING THE TRANSPORTATION SYSTEM



“Transportation Management Networks will provide the fundamental foundation communication layer for Data Sharing, V2X connections, and significant real-time traffic data acquisition and sharing” - USDOT



USDOT - Technology convergence will revolutionize transportation, dramatically improving safety and mobility while reducing costs and environmental impacts

Connected Vehicles

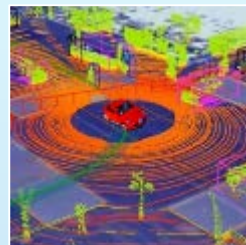
Vehicle Automation

Internet of Things

Machine Learning

Big Data

Mobility As A Service (MAAS)



Connected-Automated Vehicles

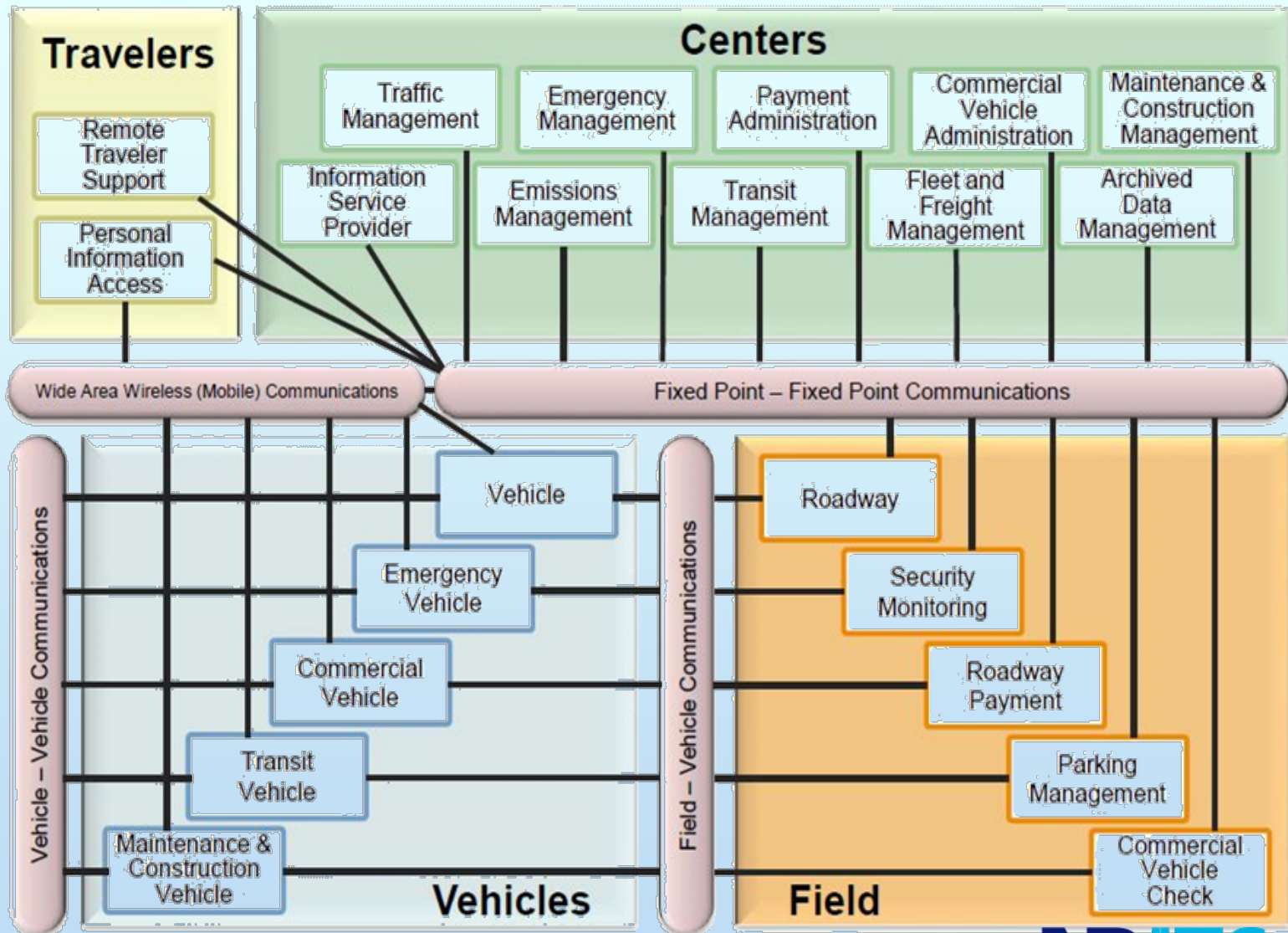


Smart Cities

Benefits

- Order of magnitude safety improvements
- Reduced congestion
- Reduced emissions and use of fossil fuels
- Improved access to jobs and services
- Reduced transportation costs for gov't and users
- Improved accessibility and mobility

DATA ARCHITECTURE TEMPLATE



WRAP-UP



Real-Time Data Solutions



Find Partners



Define Policies



Build a Strong,
Adaptable
Infrastructure Solution



Know Your Part of
the Mission



Know What You
Have & STOMP!

STOMP YOUR NETWORK!

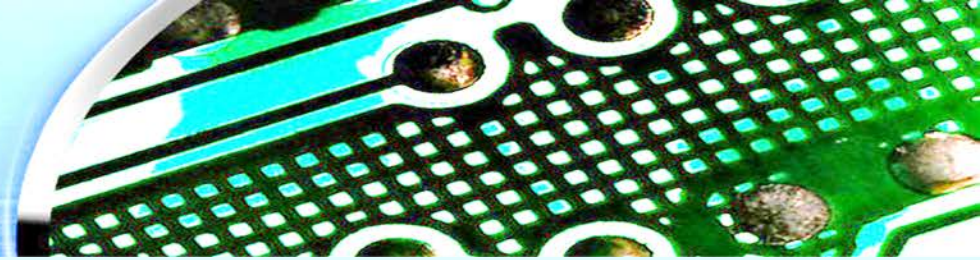
Standardize

Technology

Operations

Maintenance

Policy



Want to know more?

gbaSI Network Services

Network Architecture
IT Coordination
Wireless Systems
Internet of Things (IOT)
Security

gbaSI Design Services

Systems Infrastructure
Asset Management
Master Planning
Innovation
Modernization

gbaSI Integration Services

Management & Operations
Switches & Routers
Programing
IOT Edge Devices
Install & Config
Control Systems

Applied Tech Group

Traffic Operations
Systems Engineering
TSMO
C/AV
Analytics

SMART Training

IMSA
Fiber Optics
TSMO



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