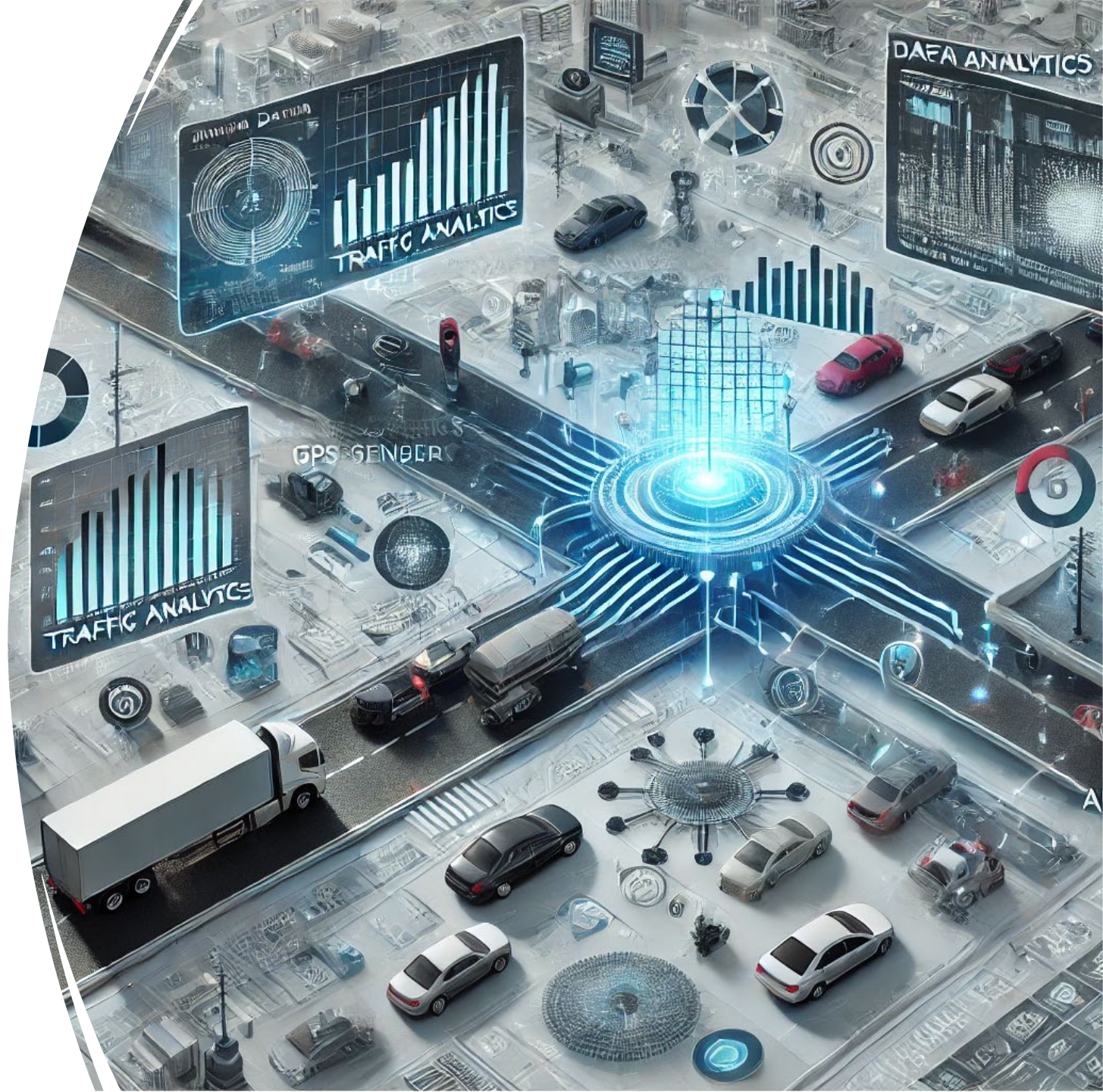


Data Science and Automation

From Raw Data to
Actionable Insights



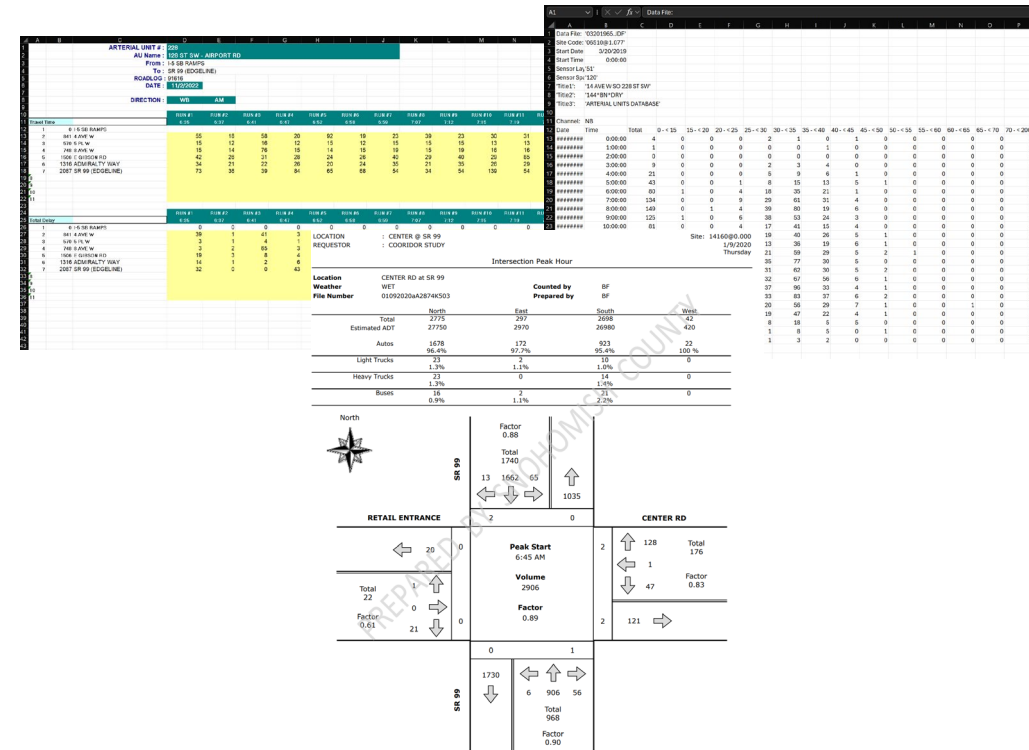
OUTLINE

- ✓ The Data Challenge
- ✓ Data Solutions and Automation
- ✓ Mobility and Safety Use Cases
- ✓ Implementation Roadmap
- ✓ Example




The Data Challenge


- ✓ Many data sources and formats
- ✓ Manual collection methods
- ✓ One and done
- ✓ Lack of understanding of data tools
- ✓ Fragmentation
- ✓ No planning or roadmap




Multiple Data Sources




Traffic Sensors




GPS Telemetry




Weather Systems



Incident Reports



Transit Feeds

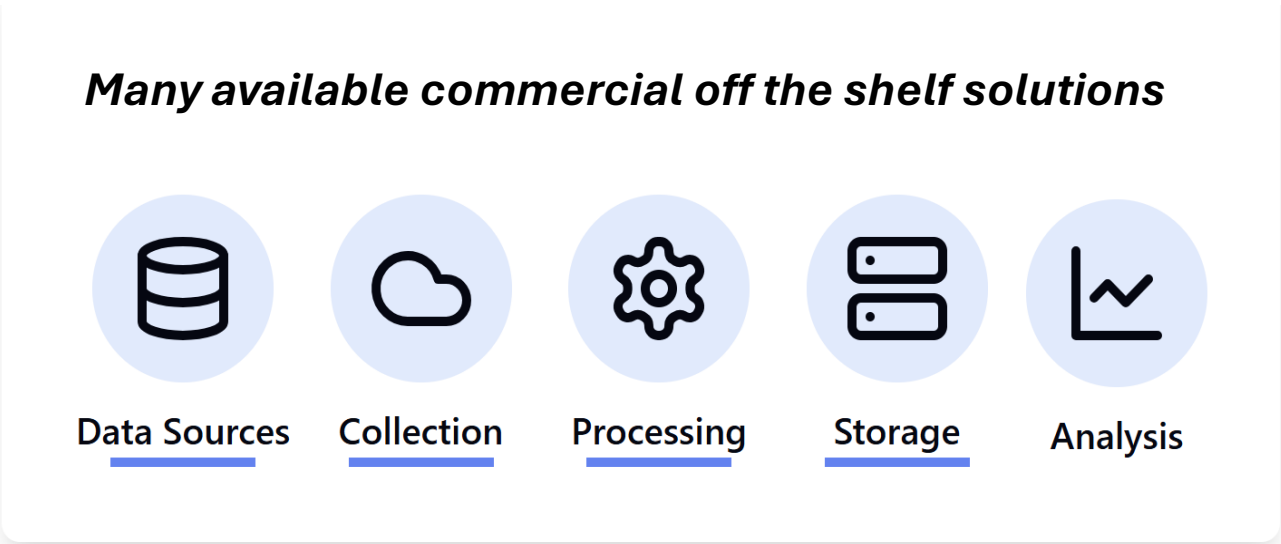


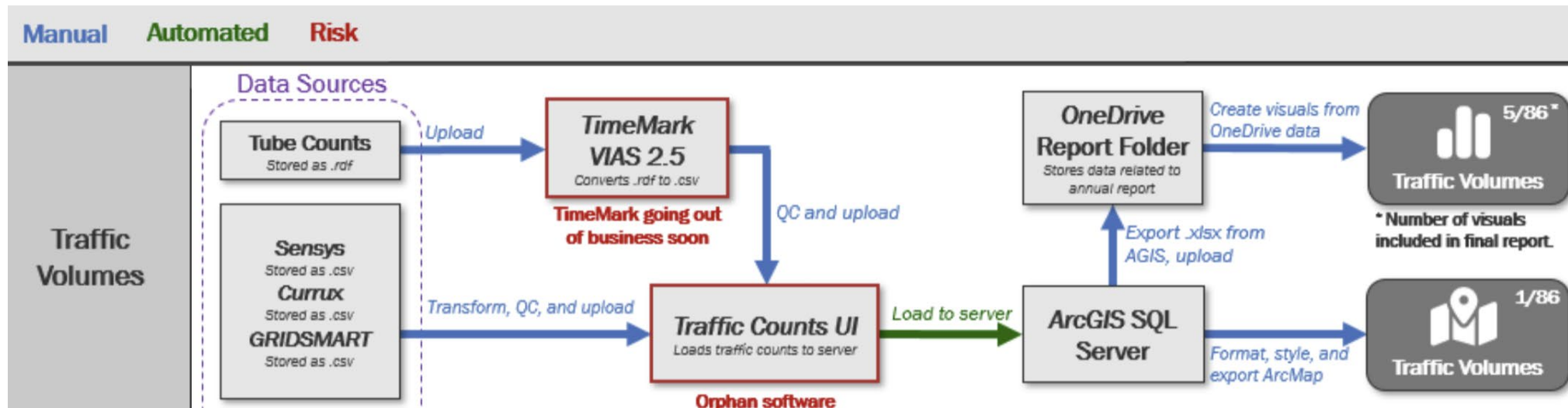
Infrastructure

Data Solutions and Automations



Commercial off the shelf solutions





Automation

- ✓ Workflow automation opportunities
- ✓ Leverage available automation tools
- ✓ Plan before implementing

Data Tool Selection Considerations

Core Requirements

- User needs
- Data volume and frequency
- Automation tools
- Integration capabilities
- Scalability
- Analytics tools
- Dashboarding / Reporting

Technical Features

- Code vs No Code
- API and data pipeline tools
- Data format support
- Storage options
- Real-time processing
- Credentialing and security

Practical Considerations

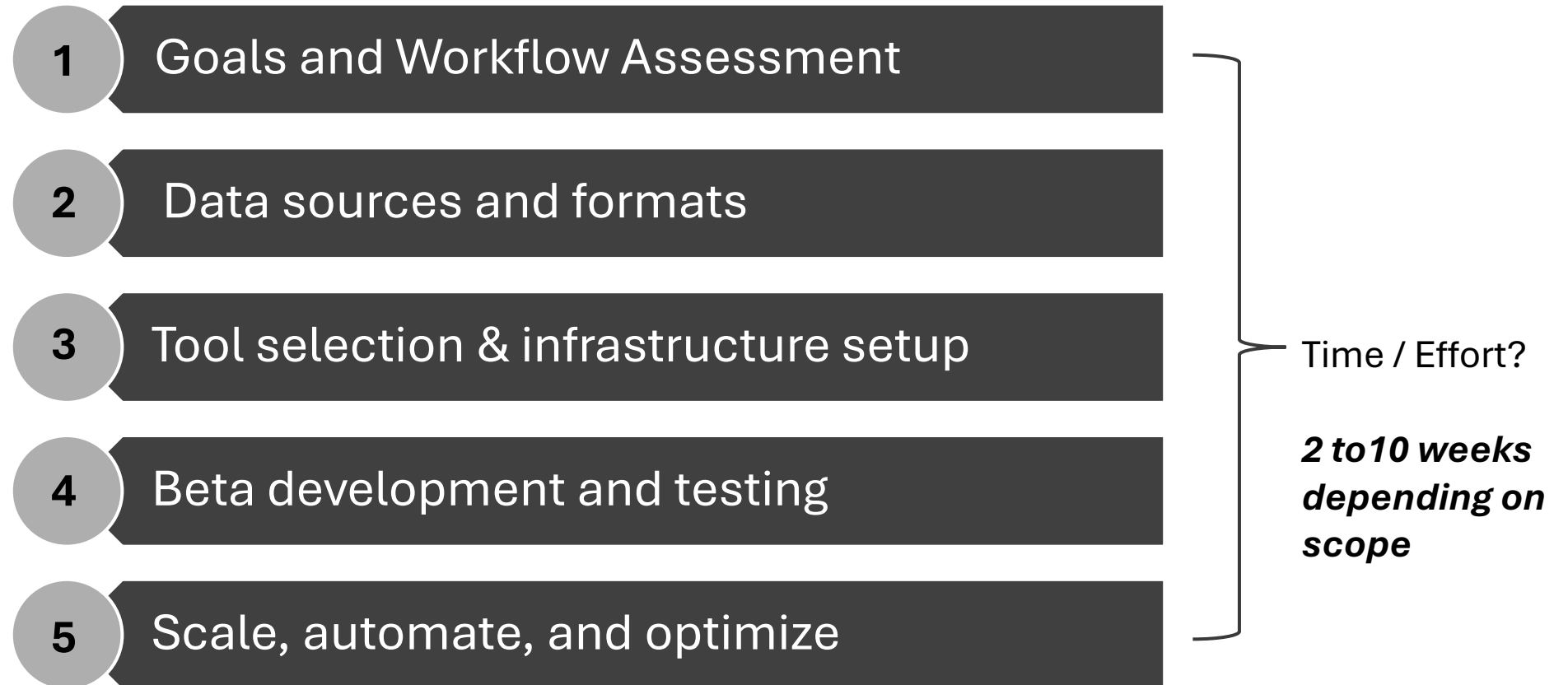
- Agency IT ecosystem
- Cost effectiveness
- Ease of implementation
- Integration with existing platforms
- Commercial of the shelf
- Training
- Support

Mobility and Safety Use Cases

- ✓ Traffic data collection programs
- ✓ Annual Traffic Reports and Analysis
- ✓ Before and after studies
- ✓ Congestion and travel patterns
- ✓ Performance benchmarking and tracking
- ✓ Multimodal corridor performance dashboards
- ✓ Safety trends



Implementation steps



Examples demo

Parametrix

Hicham Chatila, PE

hchatila@parametrix.com