



Pepperell Mill Campus | Biddeford, ME

The What, Why, and How of Construction Business Intelligence and Analytics

Brendan Abbott | ATX Advisory Services | September 8, 2021

Agenda

Time	Topic
11:00 AM - 11:10 AM	Introduction
11:10 AM - 11:25 AM	Informed Decision Making: BI & Analytics
11:25 AM - 11:45 AM	Construction Business Intelligence Examples
11:45 AM - 11:55 AM	Implementation Tips and Best Practices
11:55 AM - 12:00 PM	Q&A

Meet the Speaker



Brendan Abbott

Founding Partner

Brendan is a co-founder of ATX Advisory Services and runs the ATX construction industry vertical. He is a CPA with an MBA in Accounting with over 25 years of experience leading accounting and technology service teams and engagements.

Brendan serves as a strategic advisor to high growth construction and facility services organizations looking to implement best practices and deploy world-class technology solutions. Brendan is the functional architect for the Caliper BI solution, a cloud based BI platform for the construction industry.

Prior to founding ATX, Brendan was a manager for both boutique and national technology consulting firms and has previously led midmarket companies as a CFO.

ATX Overview



ATX helps visionary companies leverage software and data to fulfill their mission

Who we are

- ▶ ATX is a technology consulting firm founded in 2013
- ▶ Team of 20 employees based in Biddeford, Maine
- ▶ Product agnostic technology advisors

What we do

- ▶ Simplify software, data and analytics initiatives
- ▶ Solve complex technology problems utilizing a business centric approach
- ▶ Developer of *Caliper Analytics* platform

Who we serve

- ▶ Dynamic businesses looking to scale, transform or improve
- ▶ Construction, Facility Services, CDFIs, Nonprofits, and Professional Services

ATX Core Services

Strategy & Selection

IT Application Strategy
Software Selection
Strategic Planning
Process Optimization

Implementation

Project Management
Implementation Strategy
System Design
Vendor Management

Integration & Automation

Integration Design
Technical Development
Workflow
Process Automation

Data & Analytics

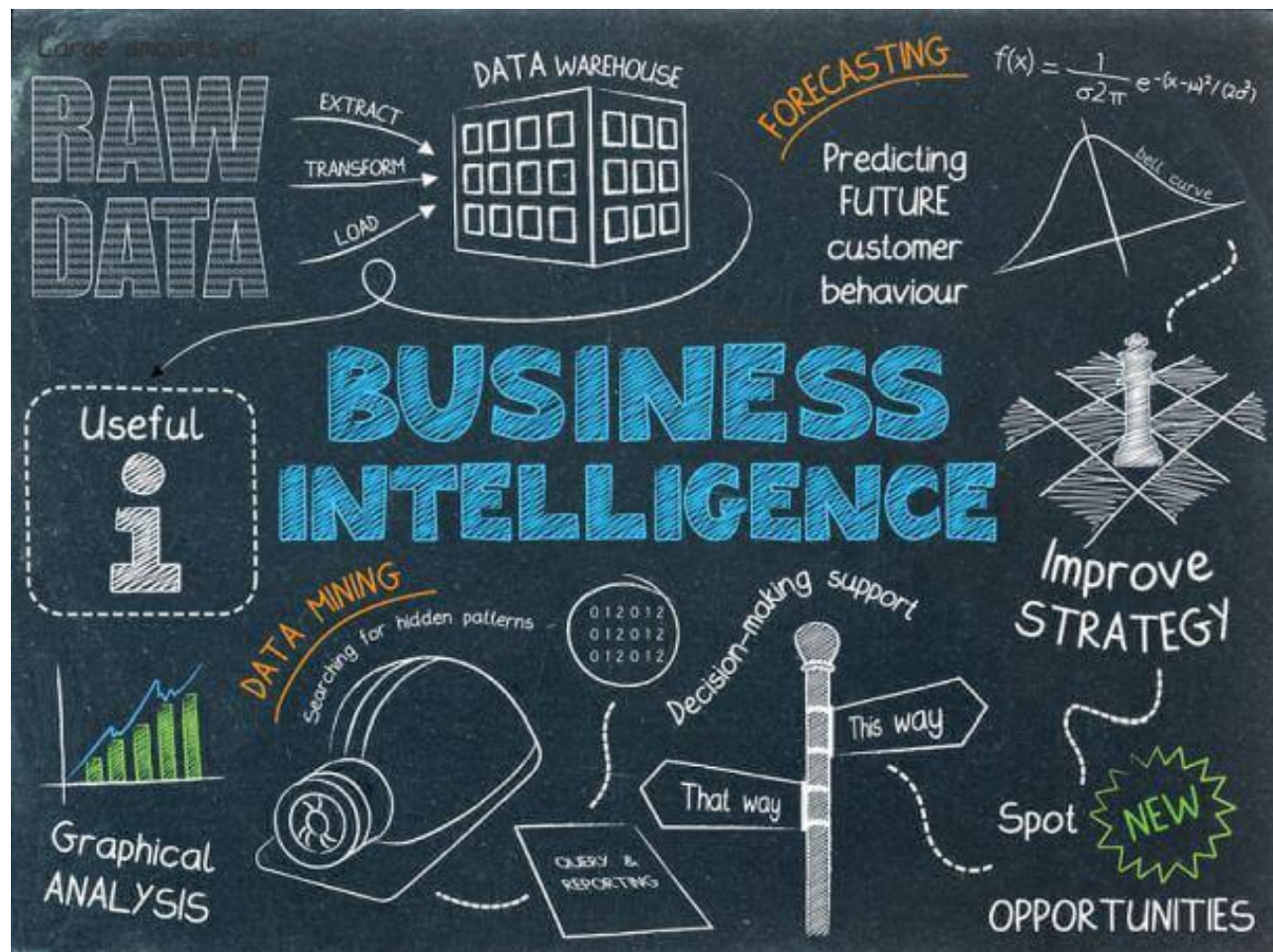
Business Intelligence
Dashboards
Metrics & KPIs
Data Warehousing



Informed Decision Making: Business Intelligence & Analytics

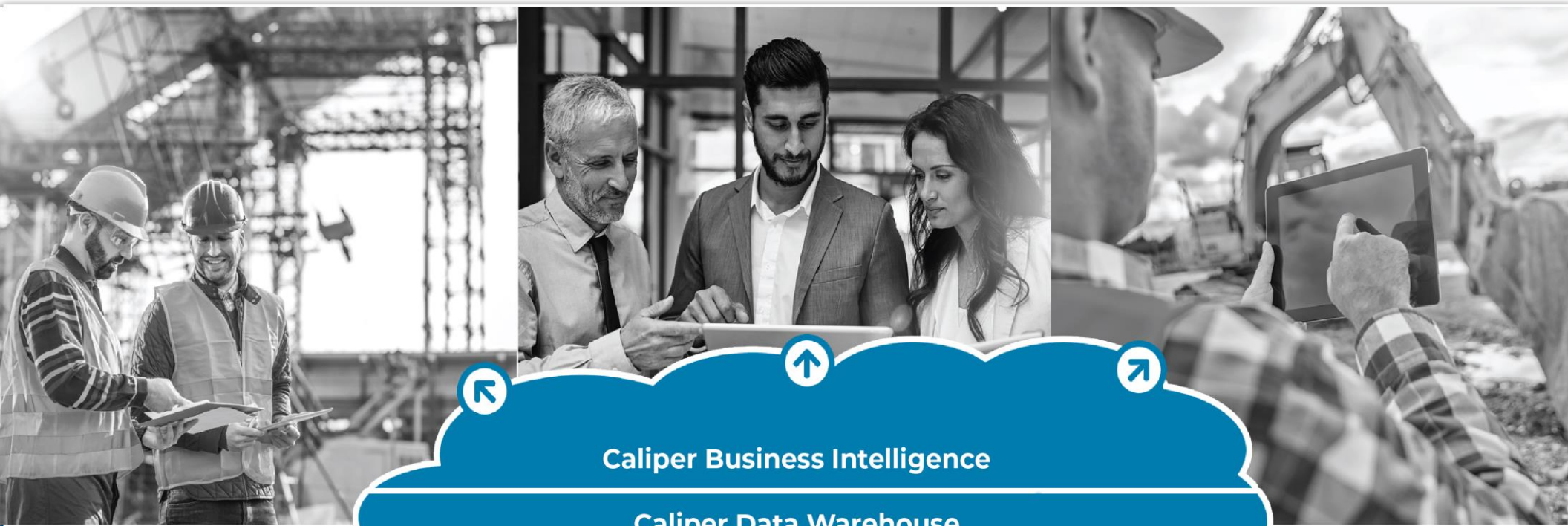
What is Business Intelligence?

Business intelligence (BI) is an umbrella term that includes the applications, infrastructure and tools, and best practices that enable access to and analysis of information to improve and optimize decisions and performance.

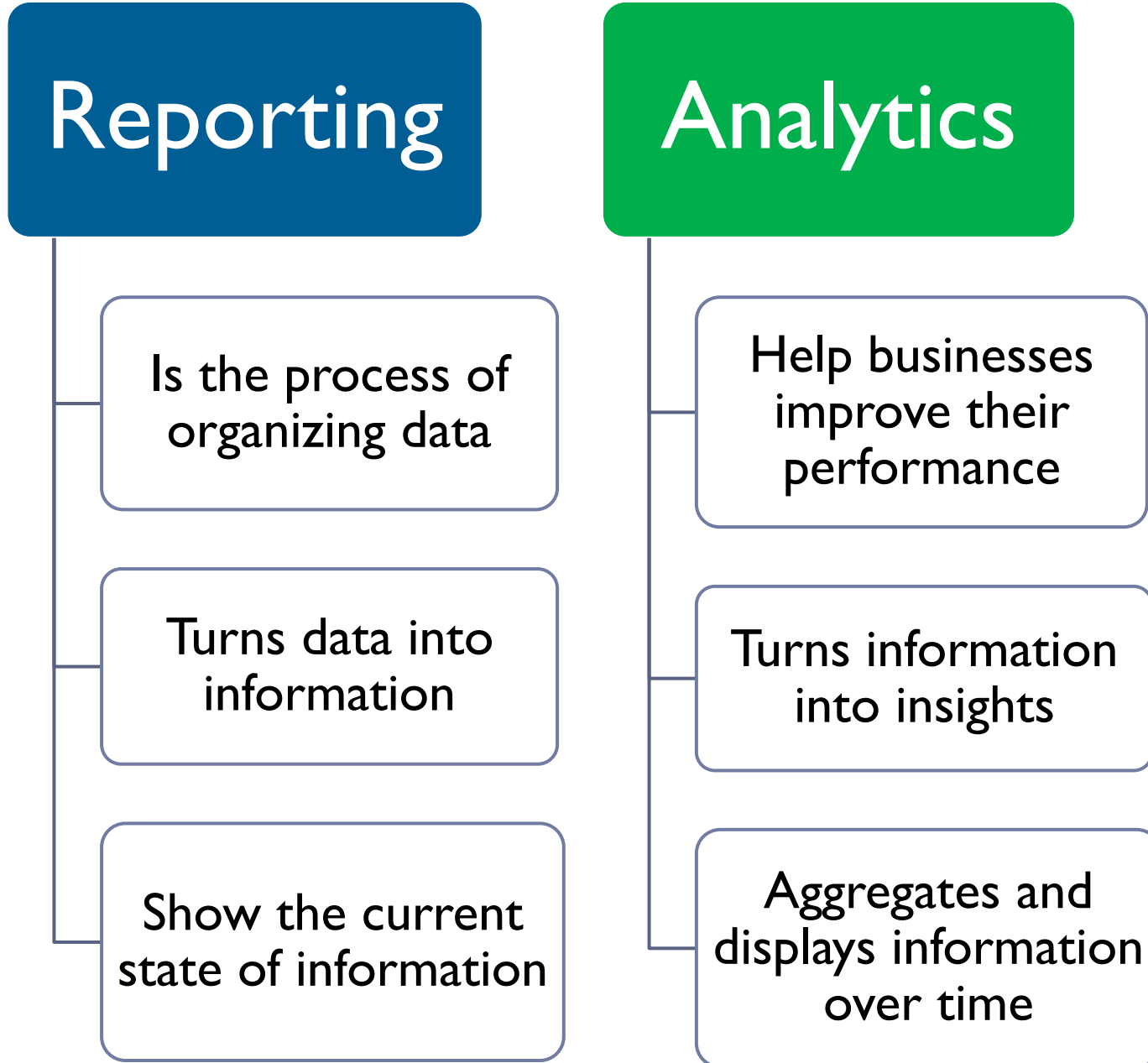


Much more going on below the surface...





The Difference Between Reporting and Analytics



Why are Visual Analytics Important?

DATA



SORTED



ARRANGED



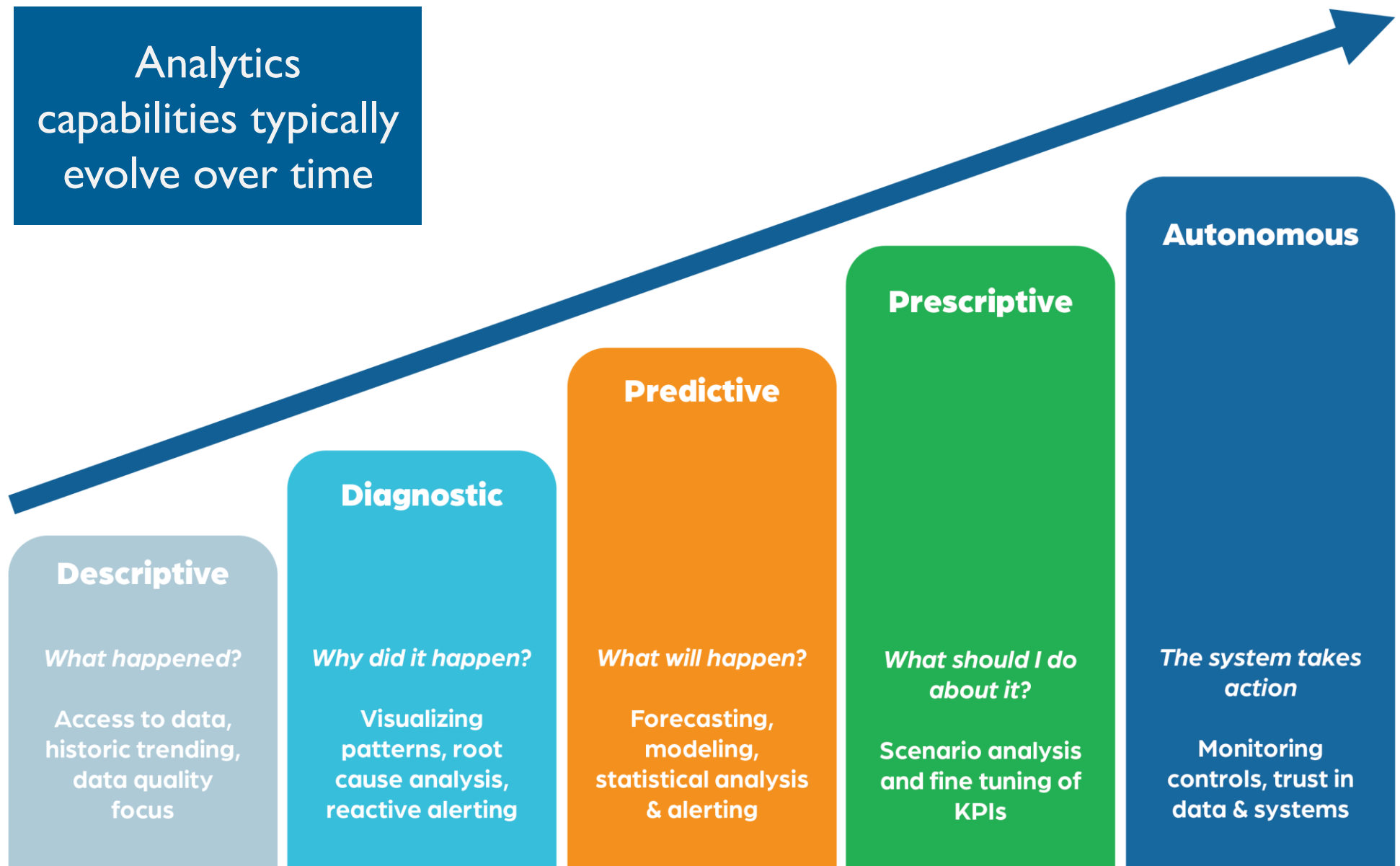
PRESENTED VISUALLY



**EXPLAINED WITH A
STORY**



BI Evolution within an Organization



Leading vs. Lagging Indicators in Construction

The difference between the two is a **leading indicator** can **influence change** and a **lagging indicator** can only show **what has happened**.

All too often we concentrate on measuring results, outputs and

outcomes and not what is coming!

What's the difference and

What are some construction industry leading indicators?

how do I know what to

look for?

- ▶ Pipeline volume
- ▶ Estimating activity
- ▶ Estimated delivery dates on supply chain PO's
- ▶ Accounts in collections/Over 120 days
- ▶ Backlog burn trending
- ▶ Growth in pending change orders
- ▶ Material price increases

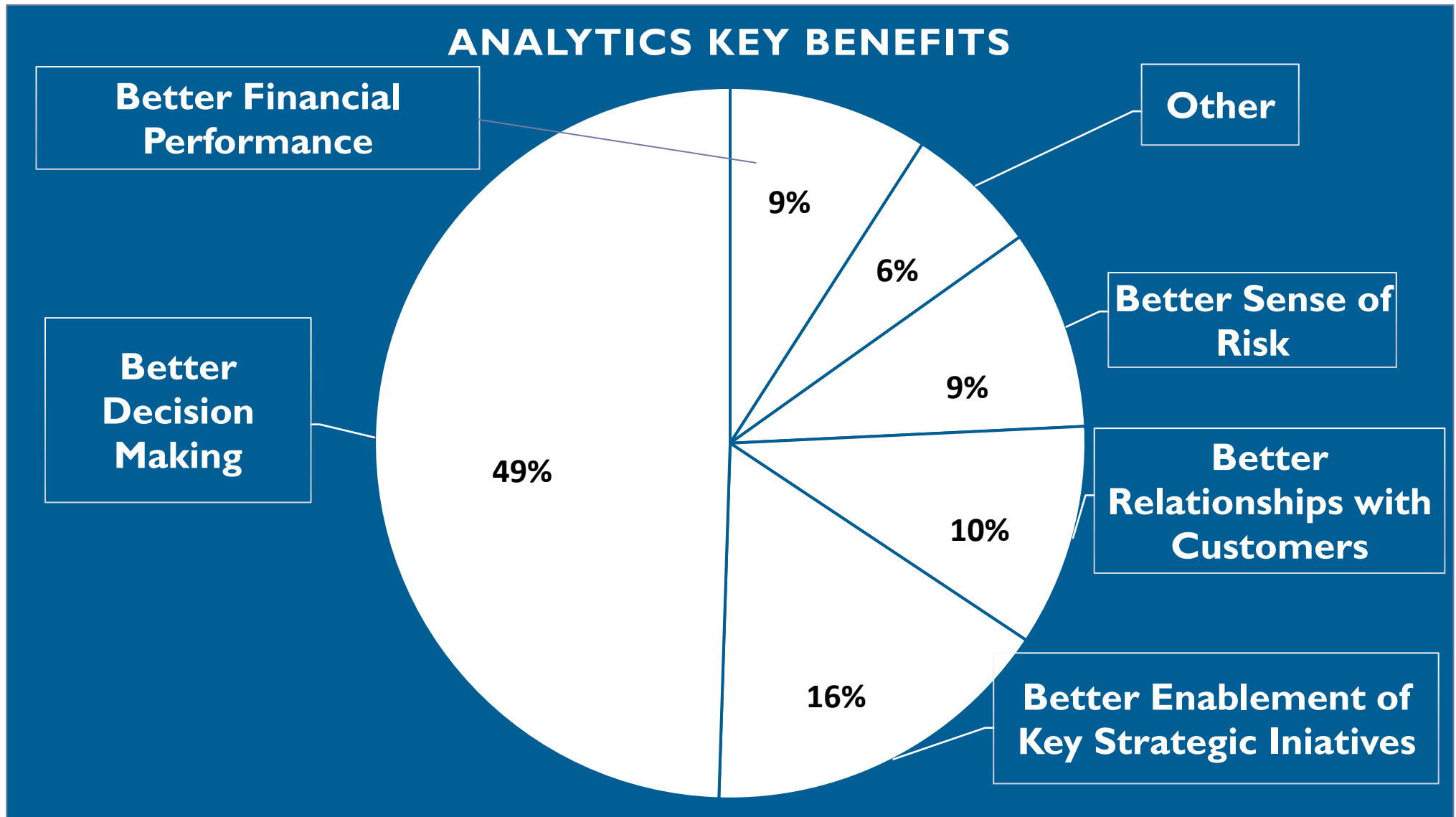


How do I see my Leading Indicator Data?

Business Intelligence and Analytics Dashboards can be configured to visually display your Leading Indicator data, **TRENDING** is key



Key Benefits of Analytics



Source: Peer - Research Big Data Analytics Survey

Why Business Intelligence Now?

- ▶ **Change will happen whether you are ready for it or not**
 - ▶ Be proactive, not reactive
 - ▶ Insights over Instinct
 - ▶ Create transparency
 - ▶ Your organization must embrace change, or change will happen to you
- ▶ Impacts we are seeing today
 - ▶ Evaluation of staffing levels
 - ▶ Doing more virtually/remote
 - ▶ Emphasis on processes/workflows
 - ▶ More focus on data integrations

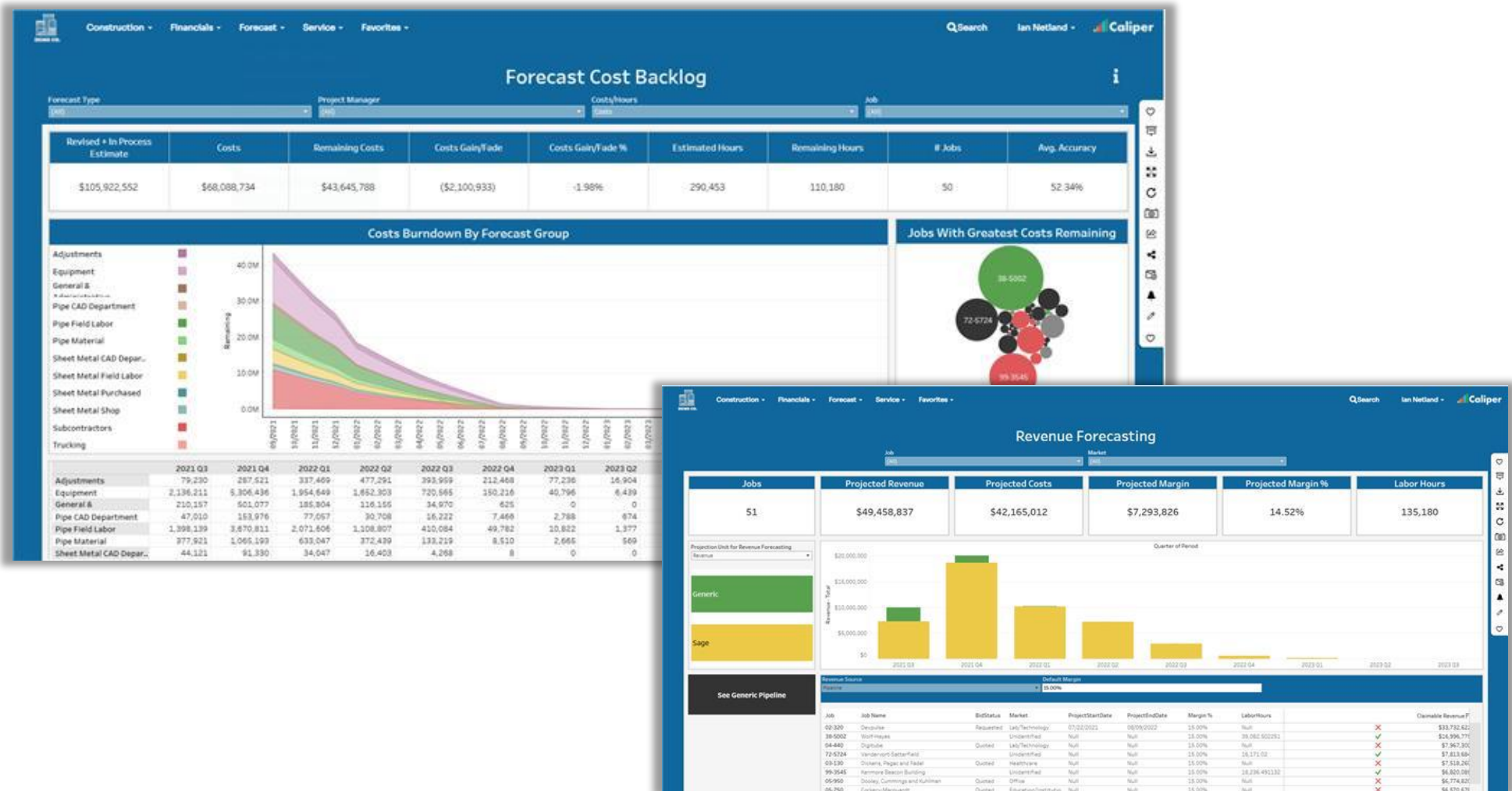
Insight-drive businesses are growing at an average of 30% each year; by 2021, they are predicted to take \$1.8 trillion annually from their less-informed industry competitors
- *McKinsey Global Institute*

The only thing that is constant is change
- *Heraclitus*



Imagine if You Could Forecast the Future?

With Business Intelligence and Analytics, you can forecast cash, revenue, costs, etc. - and adjust your plans accordingly



Construction Business Intelligence Examples

Implementation Tips and Best Practices

Building a Culture Around BI

Implementing BI and Analytics tools alone won't advance your business.
Long term success with BI requires having a data driven culture.

- ▶ Build a strategy
 - ▶ Understand your business and what drives performance
 - ▶ What are your KPI's? You manage what you measure
- ▶ Select and implement the appropriate tools
- ▶ Use the tools to deliver data and make informed decisions
 - ▶ Ability to “push” data and/or send alerts when triggered
 - ▶ Transparency is crucial to success
- ▶ Leadership & Culture
 - ▶ It starts from the top
 - ▶ Executives must value data and data driven decisions
 - ▶ Saying it and not living it will NOT work
 - ▶ All decisions require data backup – even to validate gut
 - ▶ Many leading organizations have data dedicated personnel



Implementation Tips and Best Practices

1. Understand Intent
2. Don't forget the user!
3. Data quality is key
4. Plan for things to snowball
5. “Don't boil the ocean”

Implementation Tips and Best Practices

► Understand Intent

- Start with “What questions are you trying to answer?” as opposed to what needs to be on the report
- How will it be used? In a meeting, offline, interactive?
- How often will they look at it?
- What actions do I expect the organization to take with the key takeaways from the data?



Implementation Tips and Best Practices

▶ Don't Forget the User

- ▶ Less is more: Make it easy for users to see relevant data
- ▶ Allow easy access to drill to detail
- ▶ Standardizing fields names to the business can make it easier for users to adopt – this may require standardizing taxonomy
- ▶ Embed help and training within your visualizations



Implementation Tips and Best Practices

- ▶ **Data Quality is key!**
 - ▶ Leverage tool to help including data quality dashboards
 - ▶ May require culture change and process improvement
 - ▶ Success of each step build a stronger foundation
- ▶ Ironically, many business have more “good” data than they realize though most rate their data quality as poor



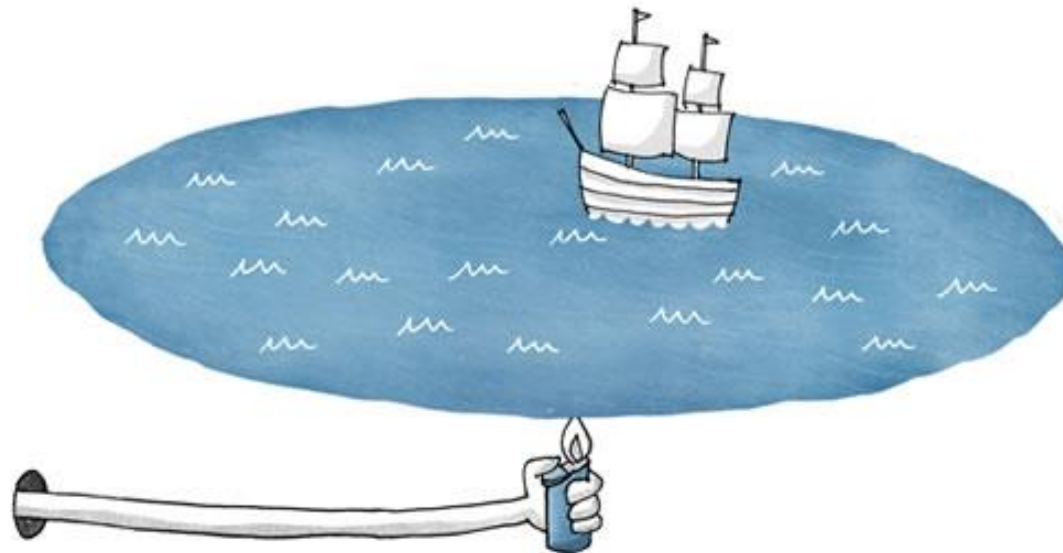
Implementation Tips and Best Practices

- ▶ Plan for things to snowball
 - ▶ People will want more, embrace it
 - ▶ Culture change
 - ▶ Normal evolution



Implementation Tips and Best Practices

- ▶ Don't boil the ocean
 - ▶ Set realistic expectations
 - ▶ Clearly define initial scope
 - ▶ Leverage an Agile framework



Questions?

Our Values

Practical Insights

Exceptional Service

Lasting Relationships

Continuous Improvement

Positive Impact



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