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Innovative Auditing Through Analytics and Automation

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Data analytics – why it matters

Data holds insight, but **it is people—not data—who ensure that analytics generates value for the company**.

- Advances in technology are raising expectations for leadership, creating new needs, and transforming the way we do business.

- Analytics is becoming a central focus of leadership agendas because of its potential to improve profitability, mitigate risk, and ensure a sustainable organization.

- 92% of leaders understand the value of integrating enterprise-wide data analytics; however,

<40% CONSISTENTLY LEVERAGE ANALYTICS

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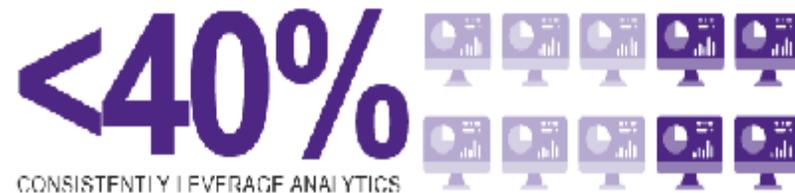
IA Function and Data Analytics

Board and C-Suite want more directed data-driven risk decisions
- The Perfect Storm - Explosive growth in raw data, technological advances in data storing and analysis, looking for data-driven decision making with a board-directed focus on current and future enterprise risks along with high-risk entity analysis

What does the future look like?
- The board looking for data-driven decisions on enterprise risk
- The C-suite looking for key risk and revenue analytics (how they impact one another) and their relevance to the organization
- The ability to "foresee" future risks before manifestation

How can data analytics be applied to the Internal Audit function?
- Historical Perspective – Error detection and quantification
- Continuous Review – Continuous monitoring and continuous review
- Future Perspective – Key Risk Indicators along with predictive and prescriptive analytics

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Top risks and focus areas for IA

Recent reports underscore the opportunity for innovation and analytics within the compliance function

Only **27%** of Legal and Compliance executives are confident in their programs' ability to manage risk.

Top risk areas for legal and compliance executives:

Corporate processes, services, and operations are fundamentally changing, which creates new risks, and exacerbates existing risks.	Legal and compliance executives must ensure that they keep pace with rapid advances in digital technology.

1. Persistent Strategic Changes
2. Legal and Compliance Skills Shortfalls
3. Corporate Digitization
4. Cybersecurity

Source: Gartner, Legal and Compliance Hot Spots Report (2018)

By 2020, 85% of CIOs will be piloting artificial intelligence (AI) programs

Legal and compliance leaders can act to help the organization make smart decisions by:

• Evaluating controls in newly automated areas to ensure risks are appropriately managed.
• Creating experiences to ensure that legal and compliance staff are exposed to AI and automation.
• Tracking developing regulations that impact emerging technologies.
• Updating existing legal and compliance risk assessments and sensing mechanisms.
• Coordinating with other assurance functions to gauge the adequacy of policies, communication, and training, and make ongoing improvements.

Source: Gartner Data & Analytics Summit press release (February, 2018)

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Helping our clients control their future.

Dynamic organizations don't wait to see what tomorrow will bring. They shape their futures today.

Create value
Transaction Services
Open new horizons for competitive advantage & business profitability. Create sustainable market strength with the blend of products and services that your customers demand and your competitors can't match.

- Assess and plan for the implications of your **tax structure**
- **Value** your assets, liabilities or contingent claims on your deal
- **Acquire** assets and businesses to expand market share, add new customers and diversify products and capabilities
- From deal promise to performance, avoid risk through **transaction integration**
- Accelerate value through **performance improvement**
- **Release capital** by divesting underperforming or nonstrategic assets and businesses

Protect value
Business Risk Services
Identify, manage and mitigate risk. Safeguard your organization to move forward confidently.

- Establish rock-solid **controls**
- Build and monitor compliance programs to **reduce legal and regulatory risk**
- Understand and protect your **cyber** assets
- Employ **analytics** to ensure compliance and combat fraud
- Drive out **fraud, waste** and **abuse**
- Safeguard assets and enterprise **value**
- Manage **third-party** relationship risks

Transform value
Business Consulting & Technology
Fine-tune your organization for optimal performance. Develop an agile, eﬃcient business engine that's ready for whatever the future may bring.

- Improve insight and processes to drive **efficiency**
- Align **technology** with **strategy** to achieve business outcomes
- Embrace and sustain **change**
- Enable deeper business **insights** based on analytics
- Optimize and elevate your **finance** function
- Improve and execute critical **initiatives**
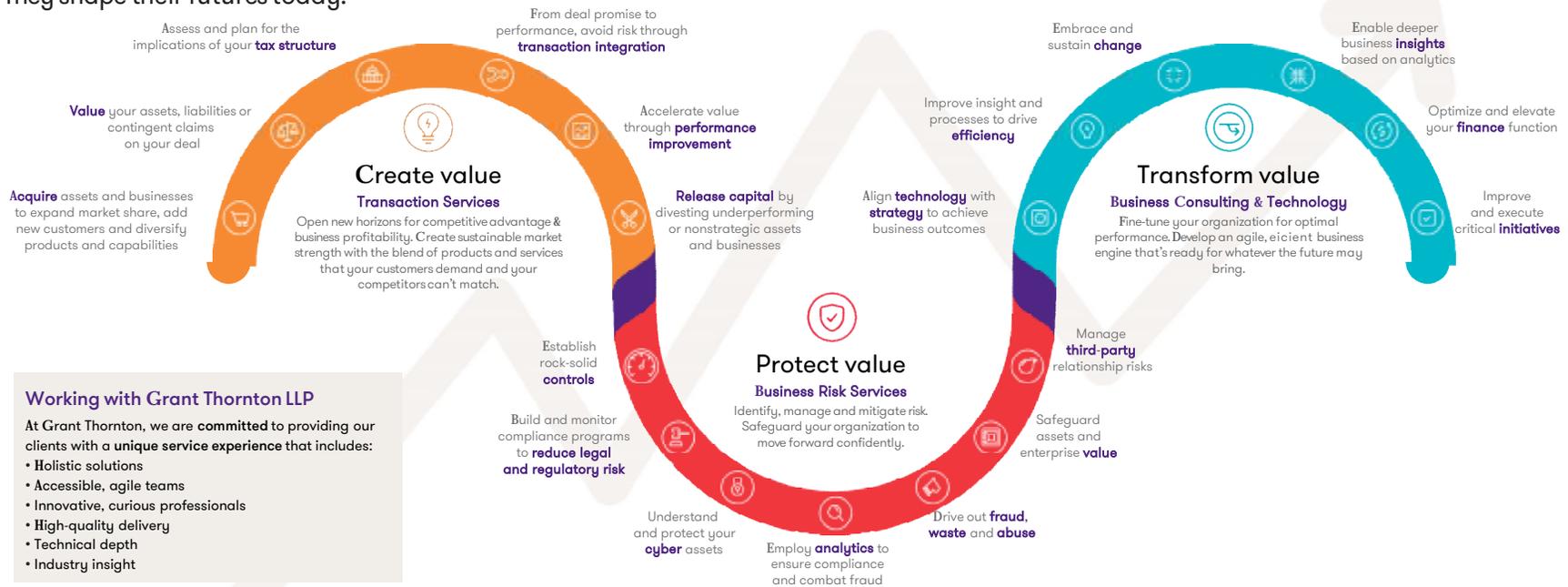
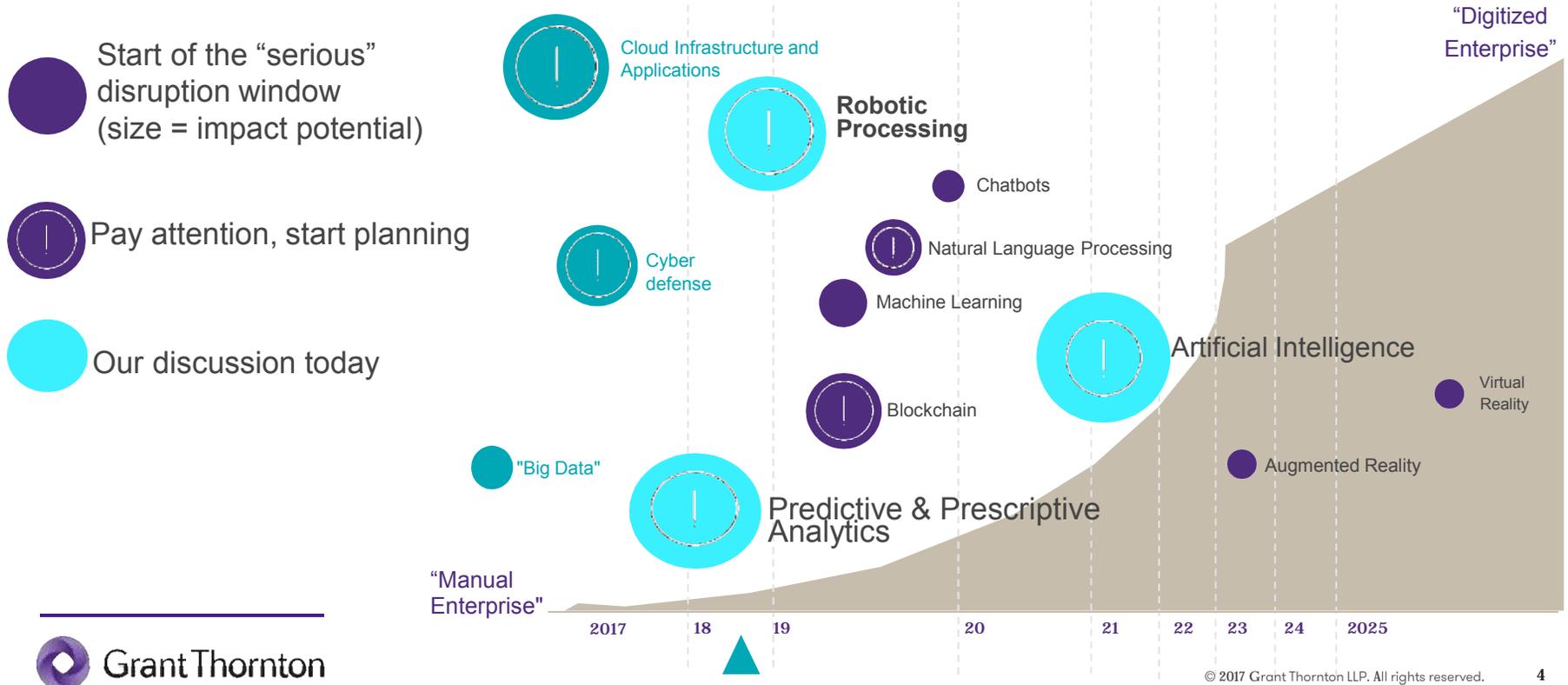### Working with Grant Thornton LLP
At Grant Thornton, we are **committed** to providing our clients with a **unique service experience** that includes:
- Holistic solutions
- Accessible, agile teams
- Innovative, curious professionals
- High-quality delivery
- Technical depth
- Industry insight

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Analytics and internal audit

Our Perspective

Start of the "serious" disruption window (size = impact potential)

Pay attention, start planning

Our discussion today

Cloud Infrastructure and Applications

Robotic Processing

Chatbots

Cyber defense

Natural Language Processing

Machine Learning

Artificial Intelligence

Virtual Reality

Blockchain

"Big Data"

Predictive & Prescriptive Analytics

Augmented Reality

"Digitized Enterprise"

"Manual Enterprise"

2017   18   19   20   21   22   23   24   2025

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GT's Approach to an Analytic Roadmap

Our roadmap methodology

Our Methodology:

Discover — Explore & Define

Transform — Collect, Prepare & Transform Data

Evaluate — Model & Evaluate Analytics

Reveal — Realize Value, Consume & Generate Insights

IA Analytic Strategy & Roadmap Consulting

- Understand the key components needed to drive analytic success
- Define and prioritize use cases that will drive value
- Embed or build analytics (e.g., scripts, visualizations, automation)
- Deploy analytics to create tangible business value

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The process to create value

| Discover	Transform	Evaluate	Reveal
Explore & Define	Collect, Prepare & Transform Data	Model & Evaluate Analytics	Realize Value, Consume & Generate Insights

- **Visioning**
- **Use case discovery**
- **Prioritization**

Analytic capabilities + **Vision & prioritized use cases** =

- **Analytic roadmap**
- **Governance playbook**
- **Implementation plan**

Ability to transform and evaluate:
- Analytic resource needs
- Architecture & design options
- Technology and "tools"
- Future state recommendations

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Use cases that will drive value

Our Methodology:

Discover — Explore & Define

Transform — Collect, Prepare & Transform Data

Evaluate — Model & Evaluate Analytics

Reveal — Realize Value, Consume & Generate Insights

- Use Case Ideas
- Prioritized Use Cases
- Evaluated Use Cases
- Planned Projects
- Delivered Projects
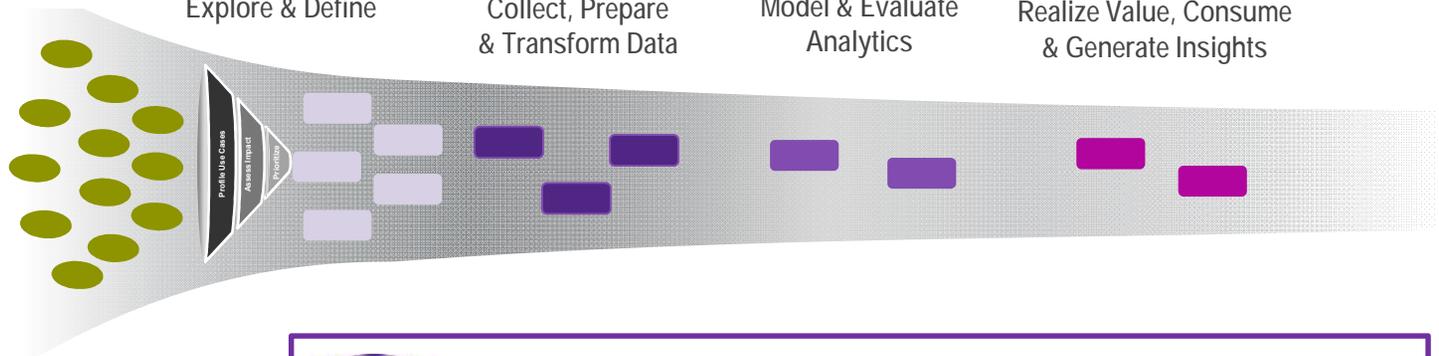
Capabilities throughout the Engagement:

- Strategy and visioning
- Analytic expertise
- Change management

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Use case #1:
start with GL analytics

Grant Thornton has developed tools to materially improve risk assessment, financial audits, and provide revenue opportunities:

- Risk score all transactions within the GL based on risk characteristics;

- Use visualizations to identify outliers and account combinations with a material impact on the financials;

- Use risk scoring to select risk-based samples across the entire population (rather than more limited samples); and

- Use analytic tests individually to probe areas of specific interest or procedures (e.g., round dollar entries, entries posted on weekends).
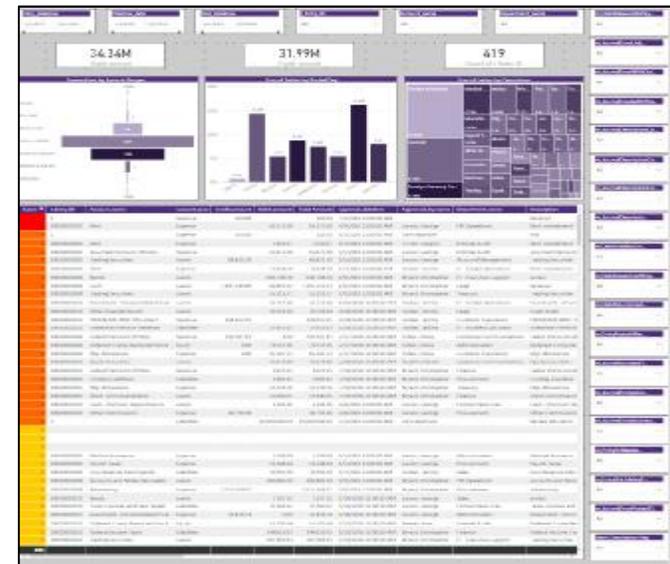
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Use case #2: control automation

Grant Thornton can help automate controls and reduce hours for testing from days to minutes.

Benefits:
- Automated Control tests take minutes, not hours or days
- Monitoring is continuous
- 100% sample compliance testing

Time savings of 75%+ per control

With Manual Assessment
2 hours per control

	Pass / Fail
Control 1	Pass
Control 2	Pass
Control 3	Pass
Control 4	Fail
Control 5	Pass

Partial Assurance

Before Adjustments Control:
- Control sampled at 25 per quarter, catching potential issues every three months
- Excessive time spent testing – 12 hours per year, or 4 hours per control per quarter.

Automated control monitoring using advance analytics – **efficient value protection**

Efficiency

Value Protection
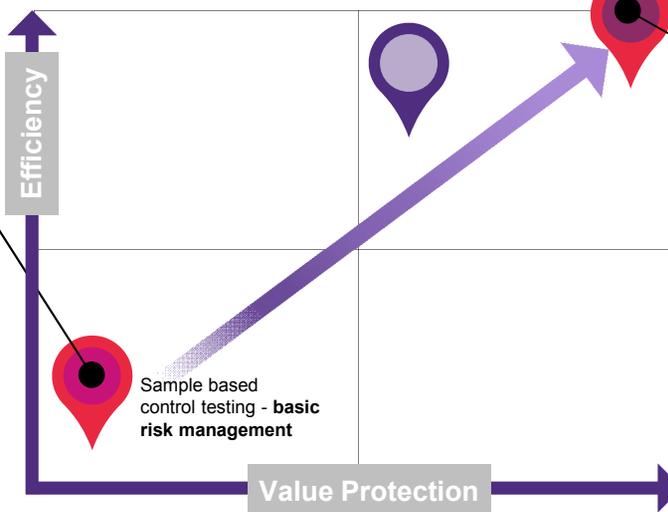
Sample based control testing - **basic risk management**

With Automatic Monitoring
<10 minutes per control

Value Protection

After Adjustments to Control (user access control):
- Control tested at 100%, in real time
- Testing performed in seconds
- *Client responds to user access problems in real time*

Use case #3: RPA

- Automate consistent activities across platforms and applications without need for integrated systems
- Processes can be continuous, working 24 hours a day

#	Process Candidate (Name)	Brief Description of Process to be Automated	How Automatable (%)	Process Value/Outcomes (% savings)	Pri.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Activity 1: Fill in these columns

#	Process Candidate (Name)	Brief Description of Process to be Automated	How Automatable (%)	Process Value/Outcomes (% savings)	Pri.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

Activity 2: Edit this field

Tower	# Processes	Est. $ Value	Est. FTE**	LOE – Bus. Days
Contact Center	2	$520,000	8.8	20
H2R			27.8	418
P2P			26.5	475
R2R	1	$30,000	0.5	10
Totals	37	$3,060,000	64	923

Activity 3: Prepare this Table

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Use case #4: AI
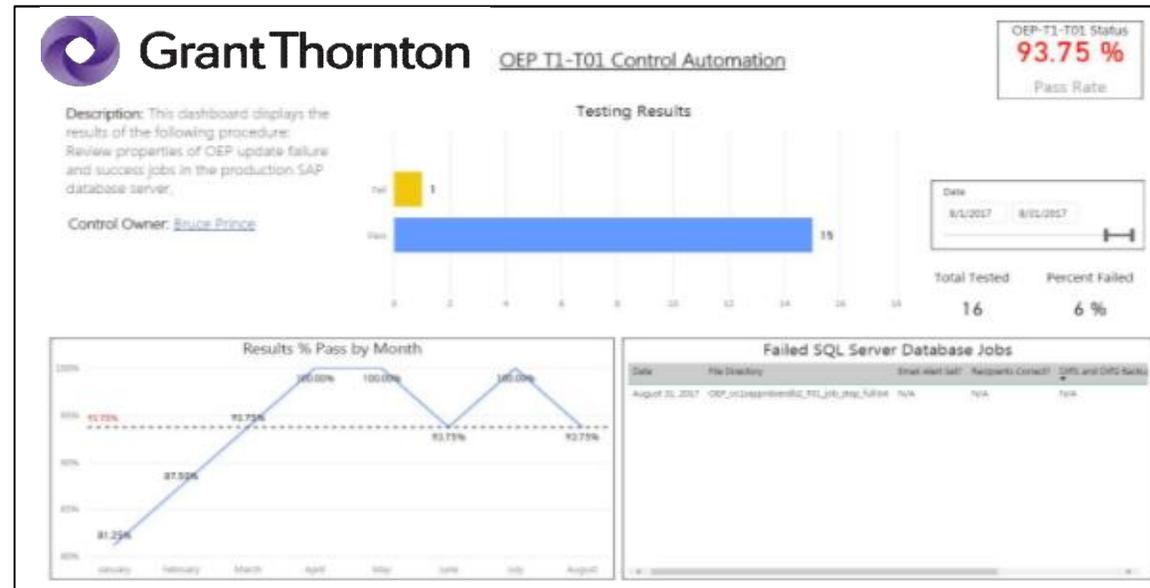
Use case #5:
start with AP analytics

- Perform diagnostic on AP data to identify unusual or potentially fraudulent activity
- Risk rank vendors and transactions to identify outliers during audit planning and testing
- Use risk scoring to identify vendors and transactions with higher risk characteristics
- Determine cost recovery potential using duplicate payment reports

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