POV

Augmented Analytics Demystified for Insurance

by **Ravindra Salavi** and **Jyotirmoy Dutta**

Abstract

Augmented analytics, powered by artificial intelligence, will change everything about the analytics and business intelligence processes, by simplifying, improving or radically changing them. By integrating artificial intelligence and natural language processing elements with traditional BI processes, augmented analytics will transform the end customer's insurance experience by data curation, revealing new insights, and making relevant information easily accessible 24X7.

Introduction

Data is a gold mine that powers the intelligent insurance enterprise. Analytics and Business Intelligence (BI) act as core enablers for mining both physical assets and digital business opportunities, thus improving accuracy, increasing efficiency, and augmenting the ability of employees to deliver business value. But though insurer continue to collect data, its real potential remains untapped. Traditional analytics and BI tools are primarily rule-based and prone to human bias, thus falling short of providing quick, relevant, and actionable insights to business users.
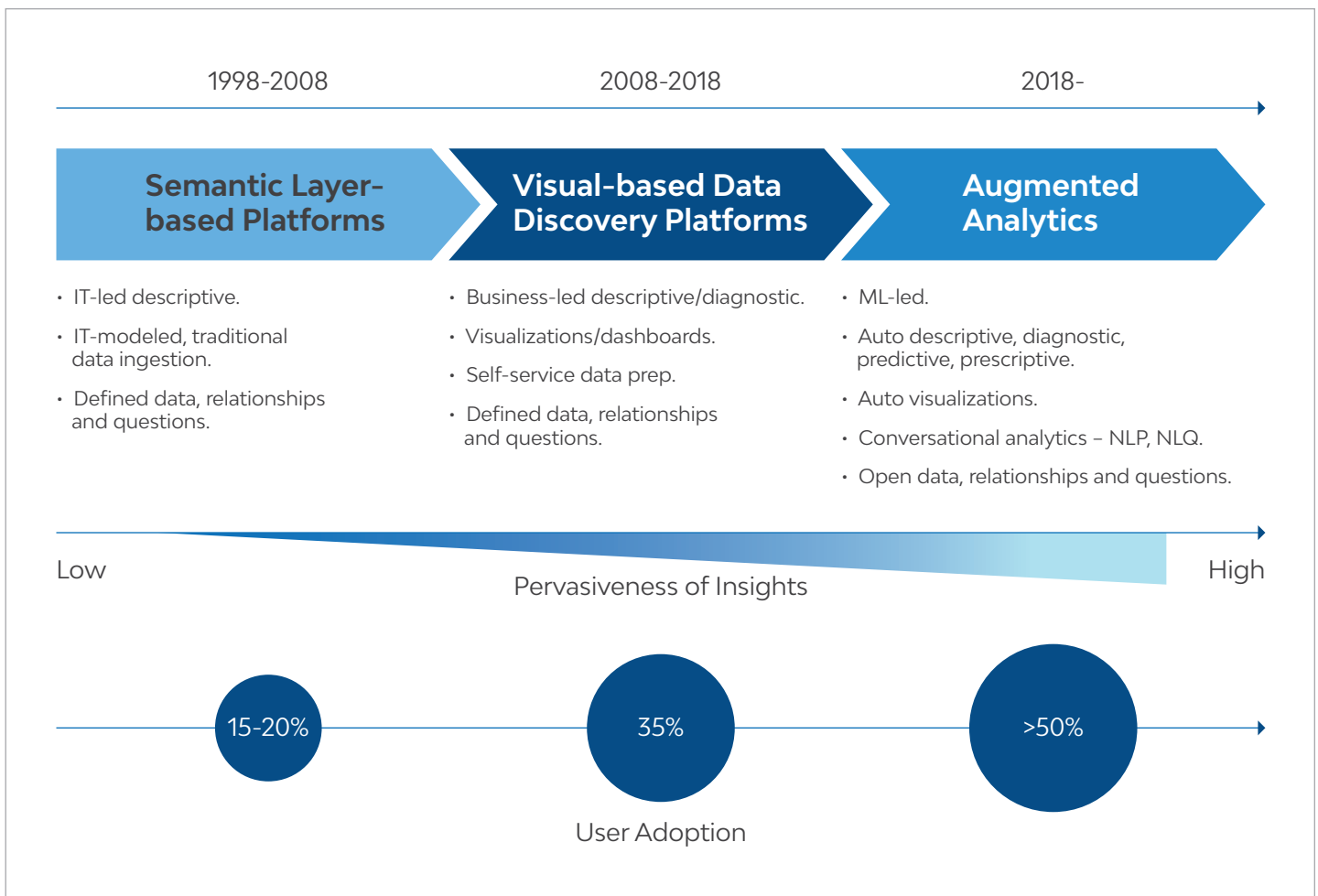
Augmented analytics has the potential to help insurers get the most out of data. It involves an intense mix of artificial intelligence (AI), often in the form of machine learning (ML) and natural language processing (NLP), and traditional analytics. Augmented analytics is a huge step forward from traditional analytics or BI tools because the AI technologies involved are continuously working at learning and enhancing results. In particular, augmented analytics allows faster access to insights derived from massive amounts of structured and unstructured data, which helps unbridle insights, from any kind of bias.

This paper takes a deep dive into the new world of augmented analytics that is poised to unlock enormous opportunities for insurance enterprises, and is powered by impartial contextual awareness and actionable insights.

Evolution of Analytics and BI

Every decade has turned a new chapter in analytics and BI technologies. From rule-based platforms to visual-based data discovery platforms, the core drivers of the modern analytics and BI market have always been relevant information, speed of delivering insights, self-service, and ready-to-consume analysis.

Augmented analytics is characterized by the AI/ML-powered automation of the insight discovery, exploration, curation, and explanation process. It's a defining feature of new-generation analytics technology, allowing users to simultaneously apply a range of algorithms and collaborative learning to data, explain actionable findings, and reduce the risk of missing important insights extracted from the data.

1998-2008	2008-2018	2018-
Semantic Layer-based Platforms	**Visual-based Data Discovery Platforms**	**Augmented Analytics**
• IT-led descriptive. • IT-modeled, traditional data ingestion. • Defined data, relationships and questions.	• Business-led descriptive/diagnostic. • Visualizations/dashboards. • Self-service data prep. • Defined data, relationships and questions.	• ML-led. • Auto descriptive, diagnostic, predictive, prescriptive. • Auto visualizations. • Conversational analytics – NLP, NLQ. • Open data, relationships and questions.

Low   Pervasiveness of Insights   High

15-20%	35%	>50%

User Adoption

***Source**- Augmented Analytics Is the Future of Analytics – Gartner

Ushering in the New Paradigm

Augmented analytics simplifies the traditional manual intensive analytics process by automating data collection, curation, and analysis to build insights.

Augmented BI (ABI)

- Natural language querying.
- Analytics automation-auto selected features, models and codes.
- Machine learning generating insights.
- Augmented model management.

"By 2020, augmented analytics will be a dominant driver of new purchases of analytics and BI, as well as data science and ML platforms, and of embedded analytics." - Gartner.
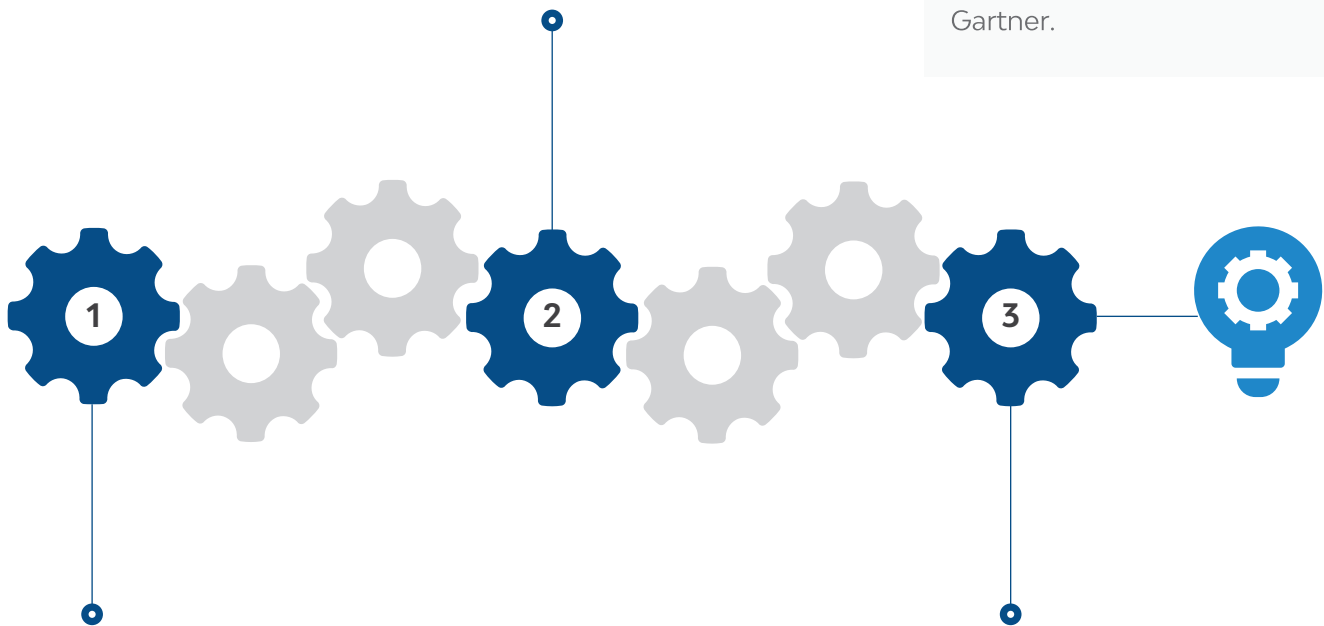
Augmented Data Prep

- Algorithms detect schemas, profile and catalog data; recommend enrichment
- Reducing dependency on IT staff to predefine data models or store data in traditional data warehouses

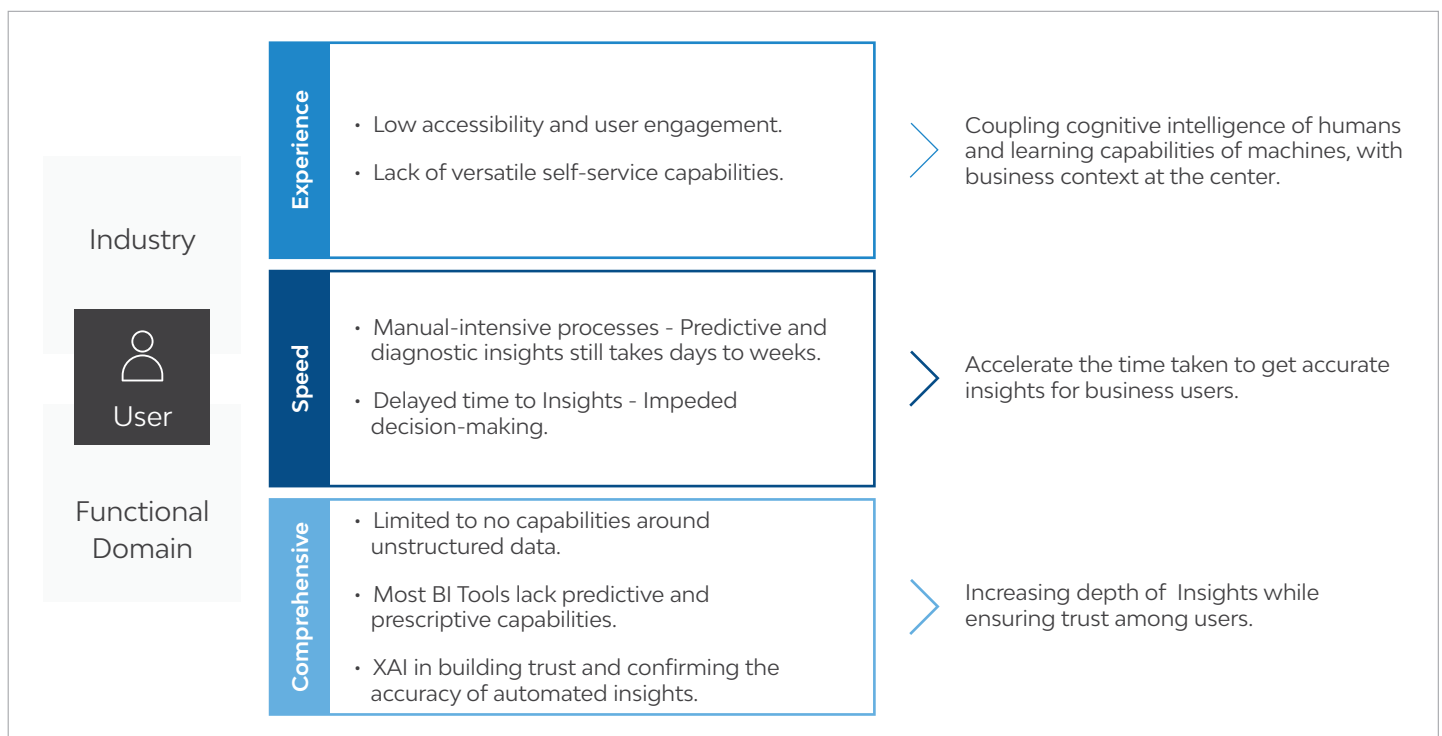### Automated Insights (Operationalize and Share)

- Ability to converse with data (NLP)
- Insights are narrated and summarized (NLG)
- Search-based descriptive to predictive insights
- Embedded in apps or conversational UI

The Emerging Power of Augmented Analytics

Augmented Analytics and Conversational AI are positioned to bring in next major Industry revolution. A Gartner* report has also marked it as the next wave of disruption in the data and analytics space. By 2021, conversational analytics and NLP will boost analytics and BI adoption from 32% to more than 50% of an organization, while 50% of analytical queries will be generated via plain text-based search, Voice, NLP or will be automatically generated. AI will also enable automation of data science tasks and facilitate citizen data scientists to produce a higher volume of advanced analysis, than specialized data scientists.

Business Value of Augmented Analytics

Augmented analytics use ML algorithms to automate the data and analytics processes, significantly reducing the time-consuming exploration, explanation, prediction, and prescription analytics process, as well as contextualizing the insights to user personas, as shown in below diagram:

Industry	**Experience** · Low accessibility and user engagement. · Lack of versatile self-service capabilities.	Coupling cognitive intelligence of humans and learning capabilities of machines, with business context at the center.
User	**Speed** · Manual-intensive processes - Predictive and diagnostic insights still takes days to weeks. · Delayed time to Insights - Impeded decision-making.	Accelerate the time taken to get accurate insights for business users.
Functional Domain	**Comprehensive** · Limited to no capabilities around unstructured data. · Most BI Tools lack predictive and prescriptive capabilities. · XAI in building trust and confirming the accuracy of automated insights.	Increasing depth of Insights while ensuring trust among users.

***Source**- Augmented Analytics Is the Future of Analytics – Gartner*

The principle behind augmented intelligence is to complement human intelligence as a force multiplier by speeding-up repetitive tasks and enabling businesses to take faster and smarter decisions. As a result, it allows data scientists and analysts to focus on solving more complex queries and data science projects, and offering critical business insights to the relevant stakeholders.

Augmented analytics should be viewed as an always-on, immersive system that guides key stakeholders from issues to visions and decisions in a tenacious environment of LOBs, things, teams, and locations. For Insurers, this translates to empowering business and leadership stakeholders with the power of AI/ML and advanced analytics to improved decision making, increased efficiency, while reducing cost and fuel innovation.

Key use cases | Augmented analytics is solving for various personas across the Insurance value chain:

Product Manager/Actuaries

Measure product performance

- Product positioning analysis
- Risk Scoring - Policing within risk score range
- What-if Analysis for product mix
- Pricing Strength - Adequate price for target loss ratio

Distribution Head

Distribution channel effectiveness

- CSI - Key reason for low CSI score
- Agent or region performance analysis
- Agent/ producer 360^0 analysis

Operations Head

Cost of insurance operations

- TAT Analysis - Submission to quote
- Top reasons for process bottleneck
- Cost trend for policy processing
- Self service capabilities analysis

Chief UW Officer

Underwriting operations

- Conversion Ratio - Major reasons for non-conversion
- UW Productivity - Efforts spent vs. case conversions
- What would be loss ratio if I applied 5% discount?

Claims Officer

Loss optimization

- Loss Optimization - Major reason for claims leakage
- Loss forecasting for major disasters
- Analyze loss reserves against actual losses
- Top reasons for higher costs of claims processing

LOB Head

Book of business

- Renewal Analysis and forecasting
- LOB, class code performance measures
- Factors impacting a region/geography performance
- Profitable LOB and factors contributing to success

Finance Executive

Financial analysis

- P&L Health - Reasons for bottom-line drain, What-if scenario analysis
- Working capital management
- Business Finance - Retention analysis, rate price change impacts forecasting

Benefits of Augmented Analytics to Insurers

- ✓ Reducing cost associated with building insights by upto 30%.
- ✓ Significantly reducing time spent on manual efforts invested in analysis and building insights, thereby enabling Insurance business stakeholders to focus on strategic matters and projects.
- ✓ Enable key business users across UW, claims and operations make informed and data-driven decisions.
- ✓ Reduce business user's dependency on IT and data scientists to generate key business Insights and reports.
- ✓ Enable accelerated business growth through faster time to insights-driven decision making.

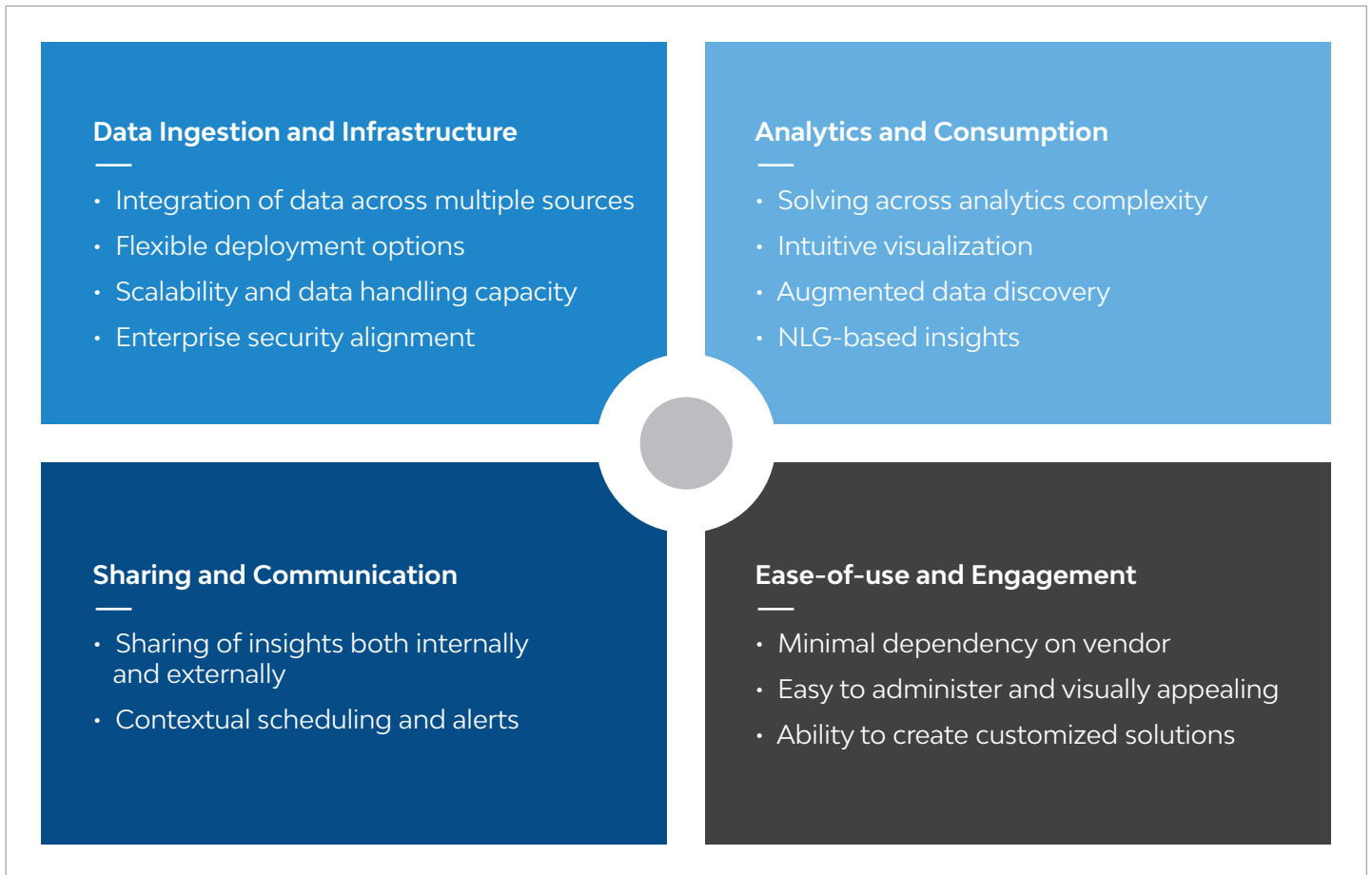Below diagram shows key benefits of Augmented Analytics to IT and Business:
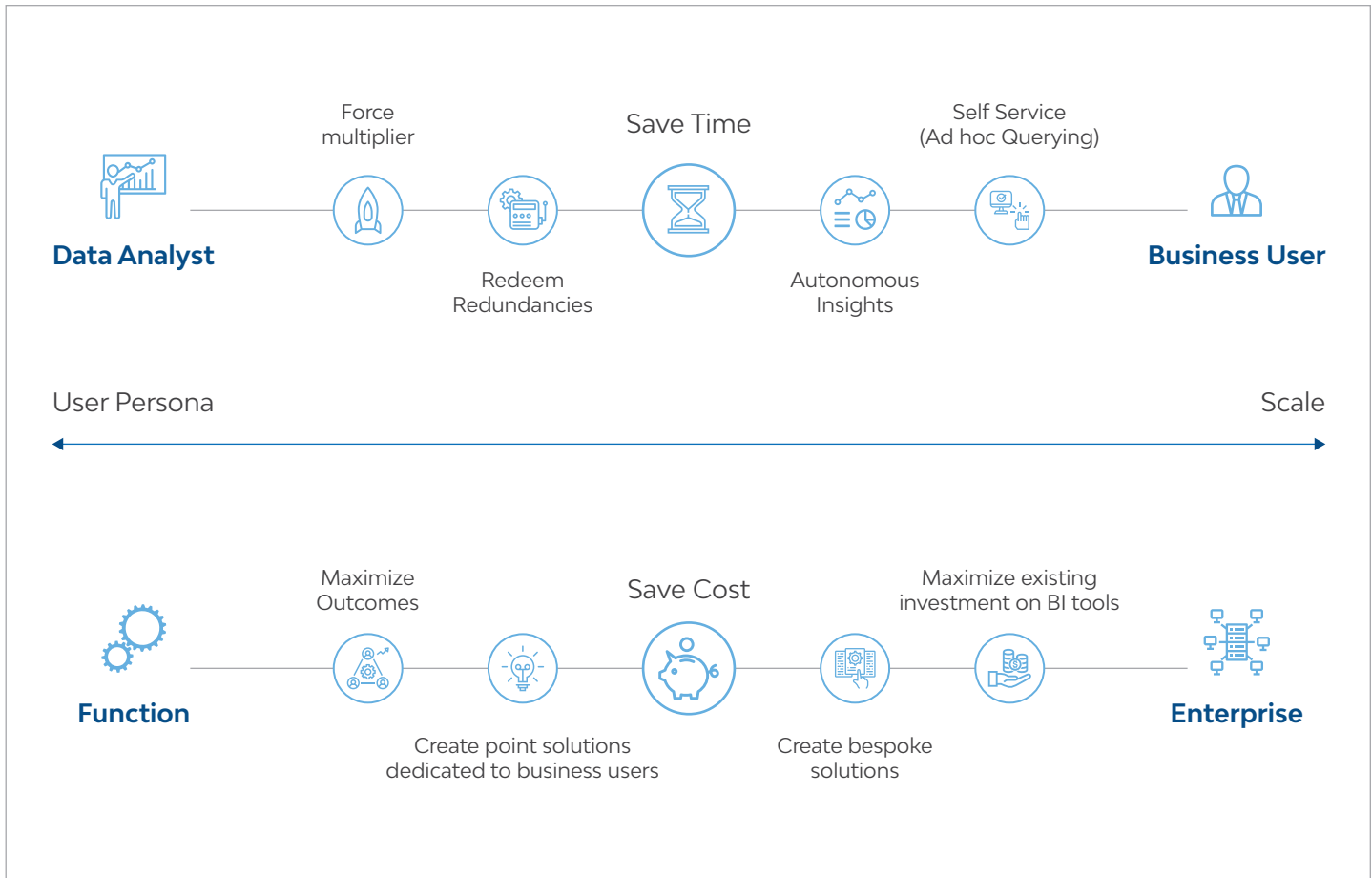
Choosing the Right Augmented Analytics Solution

One of the biggest advantages of embracing augmented analytics is the democratization of data. So, instead of exploring a static dashboard and turning to an analyst for deeper exploration, augmented analytics tools "skips to the end of the story" by providing dynamic data stories that explain patterns, drivers, clusters, outliers and correlations. It may also prescribe what the user should do based on the findings.

To unlock the potential of augmented analytics for your organization, the starting point should always be to understand its relevance and business context, technological alignment, and user advocacy for enterprise-wide adoption. The goal is to advance from dependency on legacy resources to democratized data that improves quality of business decisions.

Here's a comprehensive checklist of the criteria that needs to be considered when selecting an augmented analytics solution:

Data Ingestion and Infrastructure

- Integration of data across multiple sources
- Flexible deployment options
- Scalability and data handling capacity
- Enterprise security alignment

Analytics and Consumption

- Solving across analytics complexity
- Intuitive visualization
- Augmented data discovery
- NLG-based insights

Sharing and Communication

- Sharing of insights both internally and externally
- Contextual scheduling and alerts

Ease-of-use and Engagement

- Minimal dependency on vendor
- Easy to administer and visually appealing
- Ability to create customized solutions

Make Augmented Analytics Work for You

When implementing an augmented analytics solution, insurers must think of a wider scope. It's important to align the organization's culture, structure, and operations to support wide adoption. Insurer must devise a solid implementation strategy before investing resources or run MVPs or proofs of concept (PoCs) with no clear understanding of the benefits they can bring.

In addition to investing in the right tools and technologies, it is also essential to define the business goals and success criteria for your future augmented analytics solution to make the implementation well-paced and effective.

Conclusion

There is no doubt that augmented analytics is setting new standards for Insurance business growth. The faster you leverage this technology, the faster you can reap its benefits and growth opportunities. By automating large-scale analyses and allowing business users to generate insights, augmented analytics is paving the way for a more productive Insurance business landscape.

Author Profiles

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Ravi leads Data Analytics and AI Solutions for Insurance business unit in North America. He has more than 18 years of experience working with insurance companies. He specializes in commercial lines of business and role of Data Analytics to build risk insights, profitable underwriting decisions, and cost & fraud optimization for claims. He has led various strategic initiatives in business and IT transformation, Digital and Analytics for leading Insurers in the NA region.

Jyotirmoy Dutta

Deputy Head- LTIMindtree Leni, LTIMindtree

Jyotirmoy leads the global commercialization and business development for Leni, an AI and advanced analytics solution by Lymbyc, an LTIMindtree-acquired entity. He is responsible for evangelizing augmented analytics and helping customers build their next-generation insights and analytics platform. With a career spanning over a decade, Jyotirmoy has donned multiple hats from an insight professional to leading multiple client engagements across industries.