

# ENDLESS POSSIBILITIES WITH DATA FOR TELECOM

Navigate from now to your next



This page is intentionally left blank



## TABLE OF CONTENTS

Introduction .....	04
In a world of endless possibilities with data.....	05
Meeting and beating data challenges .....	06
What analytics and why .....	08
Analytics usage by function.....	09
The impact of other technologies.....	10
Conclusion .....	12



## INTRODUCTION TO THE STUDY

Data has become a core asset in the world displacing even oil. In the telecom Industry every operator is searching for new ways to increase revenues and profits during a time of commoditized markets and stagnant growth.

With data analytics becoming more mainstream, Telcos are seeing clear benefits from being able to apply analytics in areas such as customer value management, in forming retention investment strategy and optimizing network operations. Data has indeed started creating endless possibilities for enterprises.

Data-driven advanced analytics has tried to answer Telecom's fundamental questions on remaining profitable and has

supported the creation and delivery of a digital-age customer experience opening up new growth opportunities.

The trends here include benefits gained through a deeper understanding of utilisation patterns in switching, frequency and network traffic; alert on customer behaviour patterns indicating possible churn; imminent fraud alerts and last but not the least accurate product and service customer recommendations based on customer usage data.

Leveraging data is a crucial digital strategy for enterprises, and Infosys understands this well and has partnered with hundreds of organizations to transform into "Data Led" organizations.



## IN A WORLD OF ENDLESS POSSIBILITIES WITH DATA

To understand the expectations of the Telecom Industry with Data, we spoke to approximately 78 decision makers and key influencers in the data analytics space across US, Europe and Australia and New Zealand from organizations with annual revenues exceeding US\$ 1 Billion. The respondents were from business and technology

roles, who were decision makers, influencers and external consultants.

The data analytics benefits arise from 4 key pillars of business. They are Experience Enhancement where customer and stakeholder experience are enhanced due to analytical insights and listening; Risk Mitigation by using data for preventive analytics and fraud detection; Business model strategies that is supported by data insights driven innovation, decision making and competitive

strategies and finally resulting in the Revenue and Profit Maximization.

40% of the Telecom respondents are leveraging data in a big way to enhance customer experience. In the US it is nearly half. To stay competitive, Telco's must foster a strong and enduring customer relationship, build on actionable strategies that enhance experience by 'joining the dots' across multiple legacy billing systems and product lines through data analytics.

User Groups	Overall Telecom	Geographies		
		USA	Europe	ANZ
Base	78	46	16	16
Business Model Transformation	23%	13%	44%	31%
Experience Enhancement	40%	50%	25%	25%
Revenue and Profit Maximization	22%	17%	18%	38%
Risk Mitigation	15%	20%	13%	6%

Table 1: Scenarios where data analytics would be extremely relevant if possibilities with data were endless

*Australia's largest telecommunications company mentioned, "Our major objectives behind our data analytics initiatives are, to deliver improved customer experience, making life easier for employees and increasing productivity in the agile way".*



# MEETING AND BEATING DATA CHALLENGES

Challenges while implementing any of the digital technologies requires a culture change and availability of the right skills. >50% overall have cited that availability of the right skilled resources as the biggest challenge in implementing data initiatives. Felt more acutely in Europe at 75%.

45% overall respondents struggled a little to decipher the right analysis techniques to be deployed apart from integrating multi data sets from various sources.

*A US based wireless network operator went on to say, "We have recently teamed up with an analytics firm to gain better perspective on some of the existing issues we have pertaining to network problems".*

	Overall Telecom	Geographies		
		USA	Europe	ANZ
Base	78	46	16	16
Integrating multiple analytics tools to draw synergies	38%	41%	38%	31%
Deciding on choice of tools/ technologies to pick from	29%	22%	38%	44%
Maturity of existing systems/ architectures and technology environments	33%	37%	31%	25%
Required resource skills in the analytics realms	51%	50%	75%	31%
Absence of a dedicated analytics team to drive the initiatives to closure	13%	9%	25%	13%
Pace of execution/implementation of the initiative	26%	24%	44%	13%
Lack of high levels of clarity in the execution roadmap	27%	28%	38%	13%
Understanding the right analysis techniques to be deployed	45%	46%	44%	44%
Integration of multiple datasets for various sources	45%	46%	44%	44%
Ensuring data hygiene (correctness of data, relevance)	31%	28%	38%	31%

Table 2: Key challenges in implementing data analytics-led initiatives

50% of the respondents have found favor with choosing the right analysis technique and the right tools and technologies as the optimal way to deal with challenges arising out of data analytics implementation.

*Like a leading Australian Telecom player mentioned, "Digitizing an organization is not a project. It doesn't work if you don't have the business and technology teams together, so it's really a cultural shift."*

Approximately 19% of the people spoken to would seek a service provider help in alleviating these challenges and for advice.

	Overall Telecom	Geographies		
		USA	Europe	ANZ
Base	78	46	16	16
Identifying the right analysis techniques	50%	46%	69%	44%
Choosing the right analytics tools/ technologies	47%	43%	56%	50%
Ensuring a clear roadmap/execution strategy is set before	45%	48%	38%	44%
Deploying the right people with the right skills	41%	39%	50%	38%
Enabling/Evangelizing digital culture across the organized	41%	48%	44%	19%
Investing in latest IT Infra/Cloud technologies	38%	39%	44%	31%
Centralizing organisation wide data for better fungibility	37%	33%	44%	44%
Partnering with external service providers, data experts	19%	17%	25%	19%

Table 3: Important aspects to drive in order to overcome execution challenges in analytics initiatives

# WHAT ANALYTICS AND WHY



73% of the Telcos responded that descriptive data analytics approach has been leveraged to better customer experience, build better business models and mitigate risk through analysis of business process efficiency.

While predictive analytics ranked at 51%, notably 63% of European Telco's seem to leverage it the most to help predict industry trends.

While the industry seems to be leveraging descriptive/diagnostic and predictive analytics the most across regions, they are yet to leverage prescriptive analytics as much that can help them with data-driven decision making.

	Overall Telecom	Geographies		
		USA	Europe	ANZ
Base	78	46	16	16
Descriptive/Diagnostic analytics	<div></div> 73%	76%	63%	75%
Predictive analytics	<div></div> 51%	54%	63%	31%
Prescriptive analytics	<div></div> 26%	30%	25%	13%

Table 4: Analytics initiatives deployed or currently running in organizations





## ANALYTICS USAGE BY FUNCTION

Unlike most industries where analytics was leveraged the most by the finance and accounting function, with Telco's the

marketing function used analytics the most at 31%. Also the finance and accounting function leveraged analytics to drive

maximize profits and mitigate risks.

	Overall Telecom	Geographies		
		USA	Europe	ANZ
Base	78	46	16	16
Marketing	31%	33%	19%	38%
Finance and Accounting	24%	17%	38%	31%
Sales and Presales	18%	22%	12%	13%
Operations (Production, Supply chain, Support)	15%	17%	13%	13%
Research and Development	6%	4%	18%	–
Human Resources	4%	4%	–	5%
Sourcing and Procurement	2%	3%	–	–

Table 5: Analytics savvy functions in an organization

# THE IMPACT OF OTHER TECHNOLOGIES

Automation and AI have become an integral part of the data analytics implementation. 55% overall believe automation will help scale analytics initiatives apart from deriving standardization while implementing. For 47% driving predictive and prescriptive modelling was of most importance with Europe rating it the highest. Creation of new business models followed next at 42%.

*A British multinational telecommunications conglomerate believes, "AI-based intelligent network applications, which are based on precision algorithms, can provide intelligent network operation and maintenance (O&M) solutions, intelligent network optimization solutions, as well as intelligent network operation solutions".*



	Overall Telecom	Geographies		
		USA	Europe	ANZ
Base	78	46	16	16

## Automation

Ability to scale current analytics initiatives and deploy	55%	61%	63%	31%
Standardization of data and analysis techniques	49%	43%	56%	56%
Drawing higher efficiencies	41%	39%	63%	25%

## Artificial Intelligence

Driving prescriptive and predictive modeling	47%	48%	56%	38%
Possibility for creating new business cases/models	42%	43%	38%	44%
Effective risk detection and mitigation	26%	28%	25%	19%

Table 6: Role of AI and Automation in the analytics world

With the convergence of Cloud, Big Data and IoT, effective data management and new business

models were key resultant areas. Which was also similar for the regions. Cross organizational

synergies was rated second highest by half the Telco's.







	Overall Telecom	Geographies		
		USA	Europe	ANZ
Base	78	46	16	16
Effective data management	 51%	52%	38%	63%
New business models/cases	 51%	52%	63%	38%
Cross organizational synergies	 50%	48%	56%	50%
Predictive and prescriptive analytics	 46%	50%	50%	31%
Scalability and repeatability of analytics frameworks	 42%	39%	56%	38%
Real-time impact on decision making	 31%	30%	31%	31%

Table 7: Convergence of Cloud, Big data and IoT



## CONCLUSION

In conclusion, data analytics is a key digital tool that the Telecom industry is looking at to revive its fortunes. The key benefit that data could provide them is in the enhancement of the customer experience. While strategy is driven in house, telecom allows the business function

to implement and drive data strategy based on need and vision. This will open up many predictive and prescriptive initiatives that could bring in innovation and better business practices and customer delight as a result of embracing data into the business strategies.

### About Infosys Knowledge Institute

As enterprises navigate the path to being digital, Infosys Knowledge Institute offers thought leadership to guide their transformation. With decades' worth of business and technology experience we help enterprises strategize how they reinvent themselves from the core: their people, processes, and proposition.

## NOTES

[illegible]

## NOTES

[illegible]

This page is intentionally left blank

For more information, contact [datadomore@infosys.com](mailto:datadomore@infosys.com)



---

© 2018 Infosys Limited, Bengaluru, India. All Rights Reserved. Infosys believes the information in this document is accurate as of its publication date; such information is subject to change without notice. Infosys acknowledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, neither this documentation nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, printing, photocopying, recording or otherwise, without the prior permission of Infosys Limited and/ or any named intellectual property rights holders under this document.

[www.infosys.com/endless-possibilities-with-data](http://www.infosys.com/endless-possibilities-with-data)