



## NATURAL LANGUAGE PROCESSING MARKET

*Global Forecast To 2021*



REPORT CODE  
TC 3660

### **NATURAL LANGUAGE PROCESSING MARKET – GLOBAL FORECAST TO 2021**

By Type (Rule-Based, Statistical, & Hybrid NLP Solutions), Region (North America, Europe, Asia-Pacific, Middle East and Africa, Latin America)

#### REPORT OVERVIEW

##### 1.1 OBJECTIVES OF THE STUDY

- To define and analyze the global Natural Language Processing (NLP) market
- To describe and forecast the global NLP market on the basis of solution types, technologies, services, deployment models, applications, and verticals
- To forecast the market size of the five main regional segments, namely North America, Europe, Latin America, Asia-Pacific (APAC), and Middle East and Africa (MEA)
- To strategically analyze sub-segments with respect to individual growth trends, future prospects, and contribution to the total market
- To provide a detailed information regarding the major factors influencing the growth of the market (drivers, restraints, opportunities, and challenges)
- To analyze the opportunities in the market for stakeholders and draw a competitive landscape for the major players
- To strategically profile key players and comprehensively analyze their core competencies
- To track and analyze competitive developments such as Mergers and Acquisitions (M&A), new product developments, venture capital funding rounds, and partnerships and collaborations in the market

## 1.2 MARKET DEFINITION

Processing data in general requires fundamental understanding of semantics, syntax, and context, whether processed by machines or humans. NLP is a human to computer interaction that analyzes and understands both spoken and written forms of human languages. Thus, it assists machines to understand the language in which humans communicate (both reading and writing) and formulate basic and advanced levels of interactions with humans. This form of communication enables the computer to perform various other additional tasks such as processing of enormous amounts of data by utilizing NLP for information retrieval, information extraction, automatic summarization, and machine translation & dialogue systems. Along with this, computational machines are also capable of executing enhanced sentiment and behavioral analysis to provide business organizations with more effective informational insights.

## 1.3 MARKET SCOPE

The market study covers the NLP solutions and associated services offered by vendors, and the forecasting of the language processing market size between 2016 and 2021.

This research report explores the current and potential market for the NLP market. It scopes a wide range of perspectives covering various applications across industries

- The market size and forecast of NLP technologies and services provide a clear indication of the market size of the NLP market
- The NLP market size has also been studied via the types of technologies and services used across various regions
- The market data of the various applications of NLP technologies provides an idea of where and in what capacity are NLP solutions primarily employed

### 1.3 MARKETS COVERED

The report on NLP market categorizes this market into the following segments:

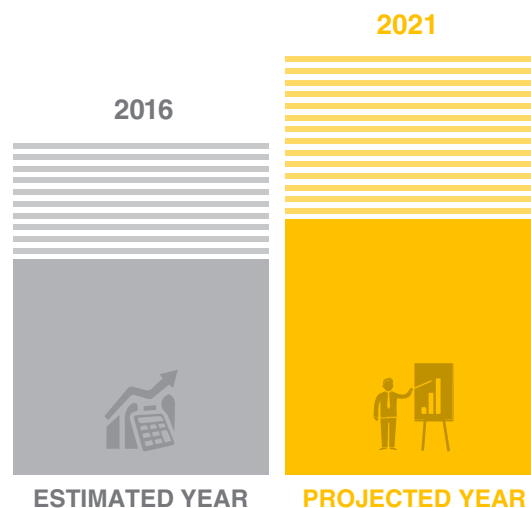
**FIGURE 1** MARKETS COVERED



Source: MarketsandMarkets Analysis and Secondary Literature

### 1.3.1 YEARS CONSIDERED FOR THE STUDY

Forecast period considered in the report is from 2016 to 2021



### 1.4 1.4 CURRENCY

The base currency used in the report is in United States Dollars (USD), with market size indicated only in USD million.

- For companies reporting their revenues in USD, the revenue was picked from their annual report.
- For companies reporting their revenues in other currencies, average annual currency conversion rate was used for the particular year to convert the value to USD.

### 1.5 LIMITATIONS

Only NLP solutions and services (professional and support & maintenance services) have been considered to arrive at the market size. The hardware equipment and other hardware-related components have not been considered. Furthermore, only the enterprise-level end users are analyzed for this report; consumer NLP is not taken into consideration as the quarterly as well as the annual reports of the vendors existing in the NLP market space do not disclose the Business-to-Consumer (B2C) revenue-related information

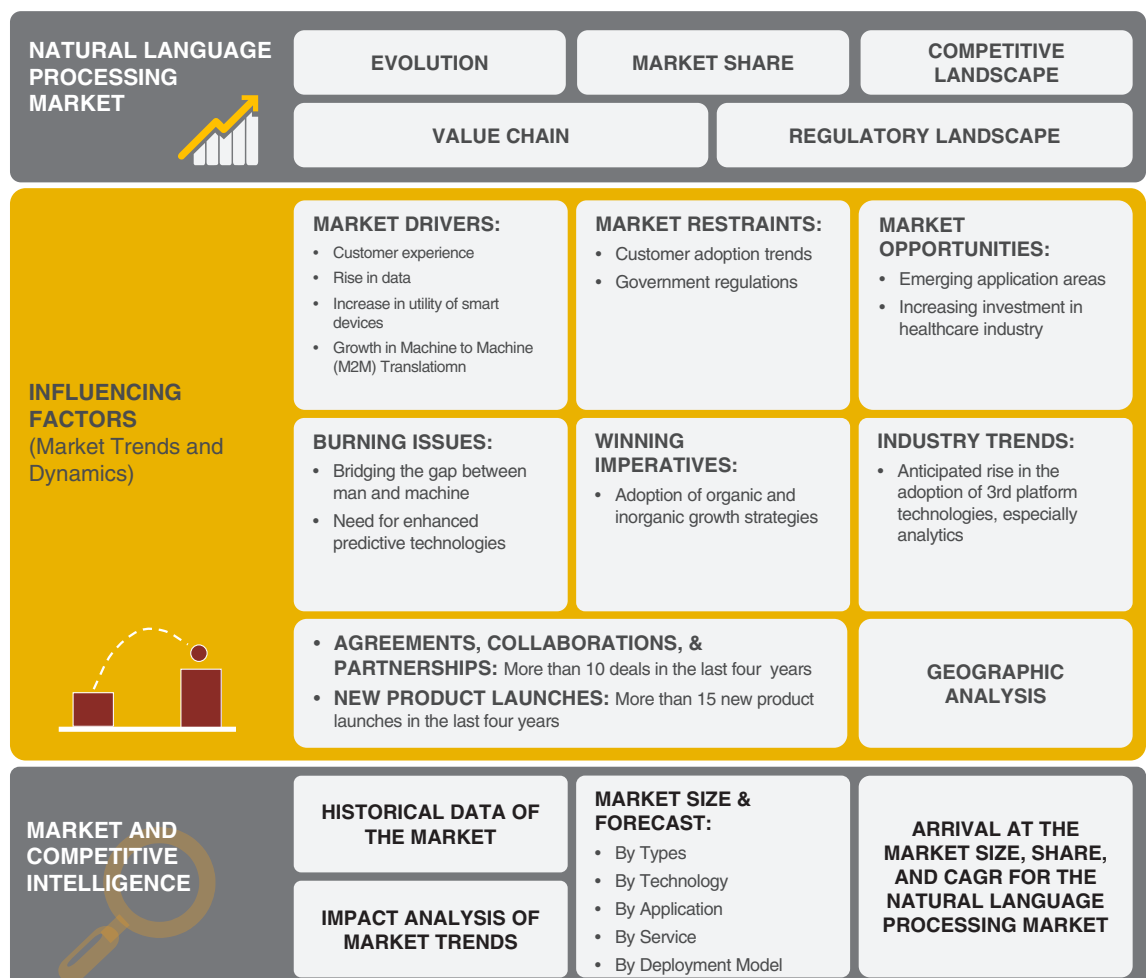
### 1.6 STAKEHOLDERS

- NLP solution vendors
- Support and Maintenance service providers
- NLP Software integrators, IT Consultants, and managed service providers
- Market research organizations and freelance researchers.
- Investors and Business Partners.

## 2 RESEARCH METHODOLOGY

This research study involved the use of extensive secondary sources, directories, and databases such as Hoovers, Bloomberg Businessweek, Factiva, and OneSource to identify and collect information useful for this technical, market-oriented, and commercial study of the NLP market. The primary sources are mainly several industry experts from core and related industries and preferred system developers, service providers, system integrators, resellers, partners, standards and certification organizations from companies and organizations related to all segments of this industry's value chain. In-depth interviews were conducted from various primary respondents that include key industry participants, subject-matter experts, C-level executives of key market players, and industry consultants, among other experts, to obtain and verify critical qualitative and quantitative information as well as to assess future prospects. The following illustrative figure shows the market research methodology applied in making this report on the NLP.

**FIGURE 2 NATURAL LANGUAGE PROCESSING MARKET: RESEARCH DESIGN**



Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis



In the secondary research process, various secondary sources were referred to for identifying and collecting information for this study. The secondary sources include annual reports and press releases; investor presentations of companies, white papers, technology journals, and certified publications; and articles from recognized authors, directories, and databases.

Secondary research was mainly used to obtain the key information about the industry's supply chain, the total pool of key players, market classification, and segmentations according to industry trends to the bottom-most level, geographic markets, and key developments, from both market and technology-oriented perspectives.

In the primary research process, various primary sources from both demand and supply sides were interviewed to obtain qualitative and quantitative information for this report. The primary sources from supply side include industry experts, such as Chief Executive Officers (CEOs), Vice Presidents (VPs), marketing directors, technology and innovation directors, and related key executives from various key companies and organizations operating in the NLP market.

After the complete market engineering (which includes calculations for market statistics, market breakdown, market size estimation, market forecasting, and data triangulation), extensive primary research was conducted to gather information and to verify and validate the critical numbers arrived at. Primary research was also conducted to identify the segmentation types, industry trends, key players, competitive landscape of enterprise information archiving and key market dynamics, such as drivers, restraints, opportunities, industry trends, and key player strategies.

In the complete market engineering process, both top-down and bottom-up approaches were extensively used along with several data triangulation methods to perform market estimation and market forecasting for the overall market segments listed in the report. Extensive qualitative and quantitative analysis was performed on the complete market engineering process to list key information/insights throughout the report.

## 2.1 RESEARCH DATA

### 2.1.1 SECONDARY DATA

#### 2.1.1.1 KEY DATA FROM SECONDARY SOURCES

PARAMETERS	SOURCES
<b>MARKET SIZE</b>	<ul style="list-style-type: none"> <li>• Company Financials</li> <li>• Magazines</li> <li>• Journals</li> <li>• Press Releases</li> <li>• Paid Databases, and</li> <li>• The MarketsandMarkets Data Repository</li> </ul>
<b>REVENUE OF COMPANIES</b>	<ul style="list-style-type: none"> <li>• Annual Reports</li> <li>• Company Websites</li> <li>• Public Databases, and</li> <li>• The MarketsandMarkets Data Repository</li> </ul>
<b>QUALITATIVE INFORMATION</b> (Market Dynamics, Market Trends)	<ul style="list-style-type: none"> <li>• Company Websites</li> <li>• Annual Reports</li> <li>• Press Releases, and</li> <li>• The MarketsandMarkets Data Repository</li> </ul>

## 2.1.2 PRIMARY DATA

In the primary research process, various primary sources from both supply and demand sides were interviewed to obtain qualitative and quantitative information for this report. The primary sources from the supply side include industry experts such as CEOs, CTOs, COOs, vice presidents, marketing directors, technology and innovation directors, and related key executives from different key companies and organizations operating in the NLP market. The primary sources include vendors providing NLP solutions, associated service providers, and system integrators.

### 2.1.2.1 KEY DATA FROM PRIMARY SOURCES

TYPES	PARAMETERS	ASSUMPTIONS
<b>GEOGRAPHIC SPLIT</b>	<ul style="list-style-type: none"> <li>Overall market and sub-segments in 2015</li> <li>CAGR of each region in the forecast period (2015 – 2020)</li> </ul>	<ul style="list-style-type: none"> <li>The global natural language processing market, by region – North America, Europe, APAC, Latin America, and MEA</li> </ul>
<b>GLOBAL MARKET SIZE</b>	<ul style="list-style-type: none"> <li>The global market size for the year 2015</li> <li>CAGR for the forecast period (2015 – 2020)</li> </ul>	<ul style="list-style-type: none"> <li>The global natural language processing market</li> <li>The natural language processing market by type</li> <li>The natural language processing market by technology</li> <li>The natural language processing by service</li> <li>The natural language processing by deployment model</li> <li>The natural language processing by application</li> <li>The natural language processing by vertical</li> </ul>
<b>MARKET SPLIT</b>	Overall market <ul style="list-style-type: none"> <li>By Type</li> <li>By Technology</li> <li>By Service</li> <li>By Application</li> <li>By Deployment model</li> <li>By Vertical</li> <li>By Region</li> </ul>	<ul style="list-style-type: none"> <li>Natural language processing market, by rule-based , statistical, and hybrid</li> <li>Natural language processing market, by IVR, OCR, pattern and image recognition, auto coding, classification and categorization, text analytics and speech analytics</li> <li>Natural language processing, by professional services and support and maintenance.</li> <li>Natural language processing, by machine translation, information extraction, report generation, question answering and Text Processing.</li> <li>Natural language processing, by on-premises and on-demand</li> <li>Natural language processing market , by banking, financial services and insurance(BFSI), automotive, healthcare and life sciences, retail and consumer goods, research and education, high tech and electronics, media and entertainment, government and others</li> <li>Natural language processing, by region</li> </ul>





After the complete market engineering (which includes calculations for market statistics, market breakdown, market size estimations, market forecasting, and data triangulation), extensive primary research was conducted to gather information and to verify and validate the critical numbers arrived at. Primary research was also conducted to identify and validate the segmentation types; industry trends; Porter's five forces analysis; key players; competitive landscape of NLP solutions and services offered by different types of market players; and key market dynamics such as drivers, restraints, opportunities, challenges, industry trends, and key strategies.

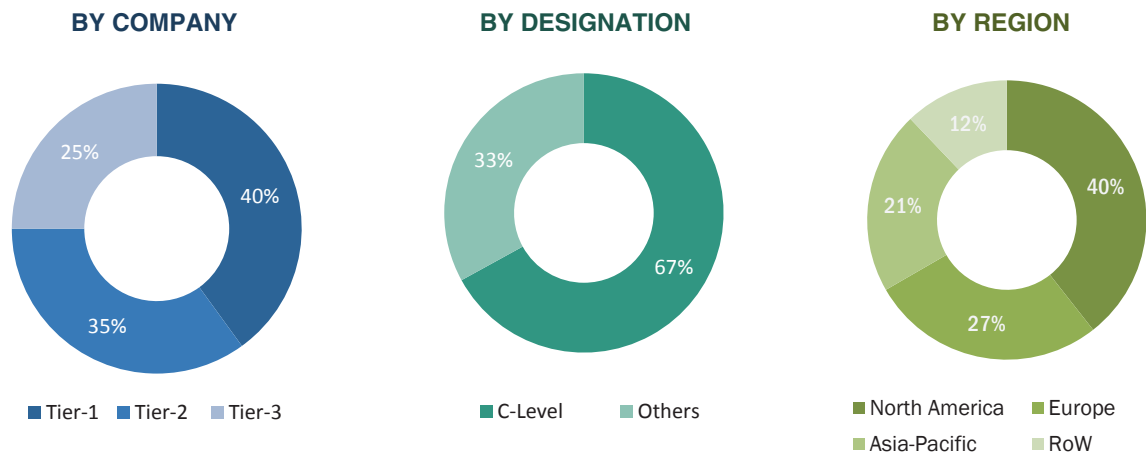
In the complete market engineering process, bottom-up approaches were extensively used along with several data triangulation methods to perform market estimation and market forecasting for the overall market segments and sub-segments listed in this report. Extensive qualitative and quantitative analysis was performed on the complete market engineering process to list key information/insights throughout the report.

### 2.1.2.2 KEY INDUSTRY INSIGHTS



### 2.1.2.3 BREAKDOWN FROM PRIMARY INTERVIEWS

**FIGURE 3 BREAKDOWN OF PRIMARIES: BY COMPANY TYPE, DESIGNATION, AND REGION**



Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis  
 Note: Others\* include Marketing Manager, Sales Manager, or Product Manager

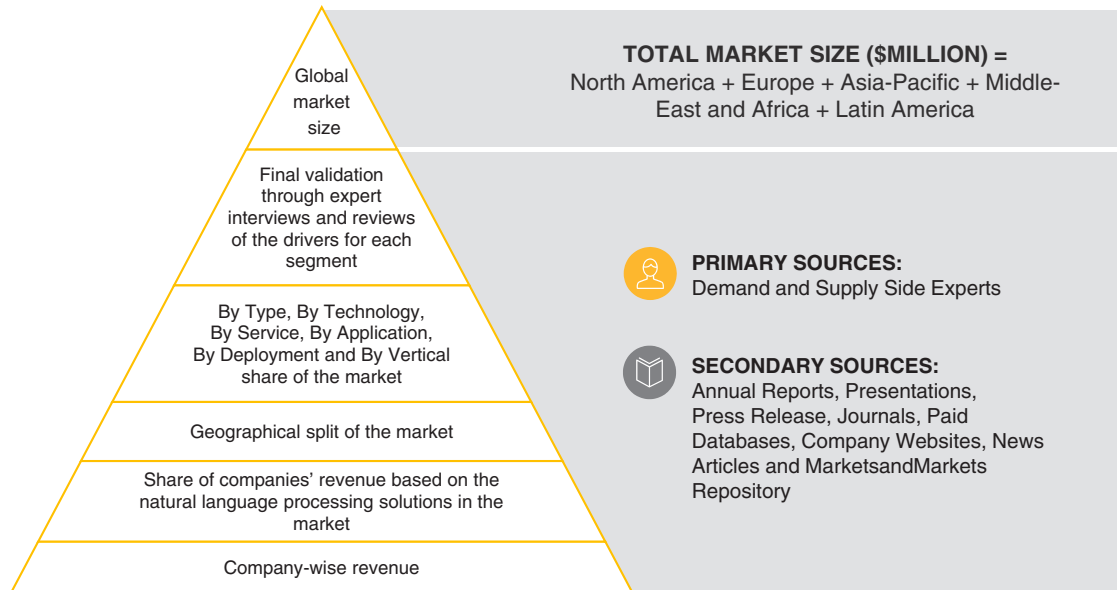
## 2.2 MARKET SIZE ESTIMATION

Top-down and bottom-up approaches were used to estimate and validate the size of the global market and to estimate the size of various other dependent submarkets in the overall NLP market. The research methodology used to estimate the market size includes the following details: The key players in the market were identified through secondary research and their market shares in respective regions were determined through primary and secondary research. This entire procedure includes the study of the annual and financial reports of top market players and extensive interviews for key insights from industry leaders such as CEOs, VPs, directors, and marketing executives. All percentage shares, splits, and breakdowns were determined by using secondary sources and verified through primary sources.

All possible parameters that affect the markets covered in this research study have been accounted for, viewed in extensive detail, verified through primary research, and analyzed to get the final quantitative and qualitative data. This data is consolidated and added with detailed inputs and analysis from MarketsandMarkets and presented in this report.

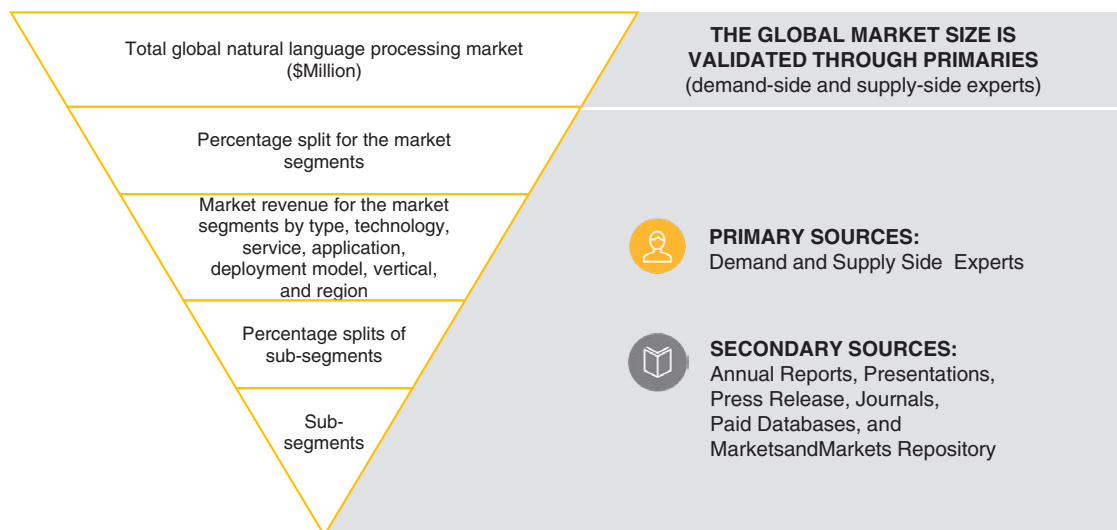
The following figure is an illustrative representation of the overall market size estimation process employed for the purpose of this study.

**FIGURE 4 MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH**



Source: MarketsandMarkets Analysis

**FIGURE 5 MARKET SIZE ESTIMATION METHODOLOGY: TOP-DOWN APPROACH**



Source: MarketsandMarkets Analysis

The bottom-up procedure was employed to arrive at the overall market size of the NLP market from the revenue of key players (companies) and their shares in the market.

Calculations based on the revenue of key companies identified in the market led to the overall market size. This overall market size was used in the top-down procedure to estimate the sizes of other individual markets (mentioned in the market segmentation of software, services, deployment models, and regions) via percentage splits from secondary and primary research.

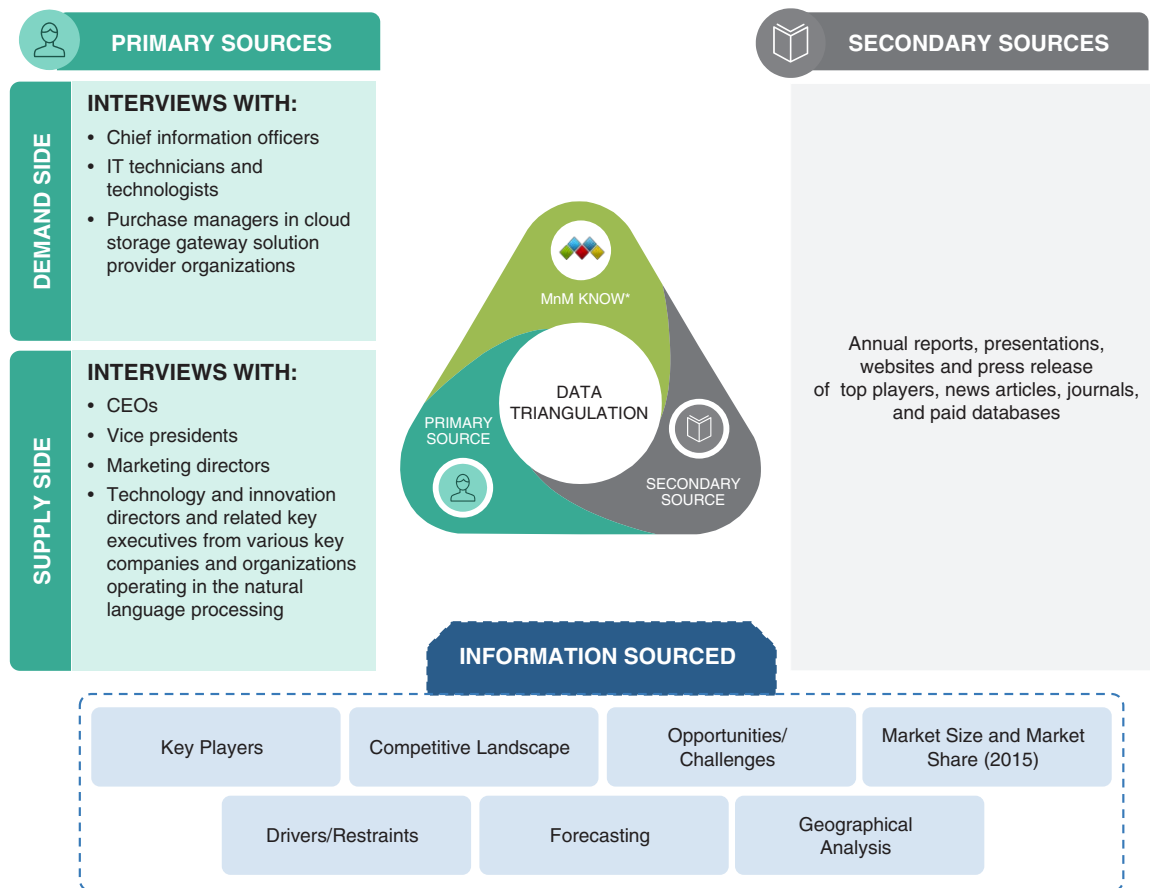
For the calculation of each type of specific market segment, the most appropriate immediate parent market size was used for implementing the top-down procedure. The bottom-up procedure was also implemented for data extracted from secondary research to validate the market segment revenues obtained.

Market shares were then estimated for each company to verify the revenue shares used earlier in the bottom-up procedure. With the data triangulation procedure and validation of data through primaries, the exact values of the overall parent market size and each individual market size were determined and confirmed in this study.

## 2.3 MARKET BREAKDOWN AND DATA TRIANGULATION

After arriving at the overall market size from the market size estimation process explained above, the total market was split into several segments. In order to complete the overall market engineering process and arrive at the exact statistics for all segments and sub-segments, the data triangulation and market breakdown procedure were employed, wherever applicable. The data was triangulated by studying various factors and trends from both the demand and supply sides. Along with this, the market was validated using both top-down and bottom-up approaches.

**FIGURE 6 DATA TRIANGULATION**



MnM KNOW\* stands for MarketsandMarkets' 'Knowledge Asset Management' framework. In this context, it stands for existing market research knowledge repository of over 5,000 granular markets, our flagship competitive intelligence and market research platform "RT", subject matter experts, and independent consultants. MnM KNOW acts as an independent source that helps us validate information gathered from primary and secondary sources .

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**TABLE 1** HYBRID: NATURAL LANGUAGE PROCESSING MARKET SIZE, BY REGION, 2014–2021 (USD MILLION)

REGION	2014	2015	2016-e	2021-p	CAGR (2016-2021)
North America	XX.X	XX.X	XX.X	XX.X	XX.X%
Europe	XX.X	XX.X	XX.X	XX.X	XX.X%
APAC	XX.X	XX.X	XX.X	XX.X	XX.X%
MEA	XX.X	XX.X	XX.X	XX.X	XX.X%
Latin America	XX.X	XX.X	XX.X	XX.X	XX.X%
<b>TOTAL</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X%</b>

Sources: Related Research Publications, Government Publications, Company Press Releases, Company Annual Report, Company Websites, Company Publications, and MarketsandMarkets Analysis

**TABLE 2** NATURAL LANGUAGE PROCESSING MARKET SIZE, BY SERVICE, 2014-2021 (USD MILLION)

SERVICE	2014	2015	2016-e	2021-p	CAGR (2016-2021)
Professional Services	XX.X	XX.X	XX.X	XX.X	XX.X%
Support and Maintenance Services	XX.X	XX.X	XX.X	XX.X	XX.X%
<b>TOTAL</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X%</b>

Sources: Related Research Publications, Government Publications, Company Press Releases, Company Annual Report, Company Websites, Company Publications, and MarketsandMarkets Analysis

**TABLE 3** NATURAL LANGUAGE PROCESSING MARKET SIZE, BY VERTICAL, 2014–2021 (USD MILLION)

VERTICAL	2014	2015	2016-e	2021-p	CAGR (2016-2021)
BFSI	XX.X	XX.X	XX.X	XX.X	XX.X%
Automotive	XX.X	XX.X	XX.X	XX.X	XX.X%
Healthcare and Life Sciences	XX.X	XX.X	XX.X	XX.X	XX.X%
Retail and Consumer Goods	XX.X	XX.X	XX.X	XX.X	XX.X%
Research and Education	XX.X	XX.X	XX.X	XX.X	XX.X%
High Tech and Electronics	XX.X	XX.X	XX.X	XX.X	XX.X%
Media and Entertainment	XX.X	XX.X	XX.X	XX.X	XX.X%
Government	XX.X	XX.X	XX.X	XX.X	XX.X%
Others	XX.X	XX.X	XX.X	XX.X	XX.X%
<b>TOTAL</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X</b>	<b>XX.X%</b>

Sources: Related Research Publications, Government Publications, Company Press Releases, Company Annual Report, Company Websites, Company Publications, and MarketsandMarkets Analysis



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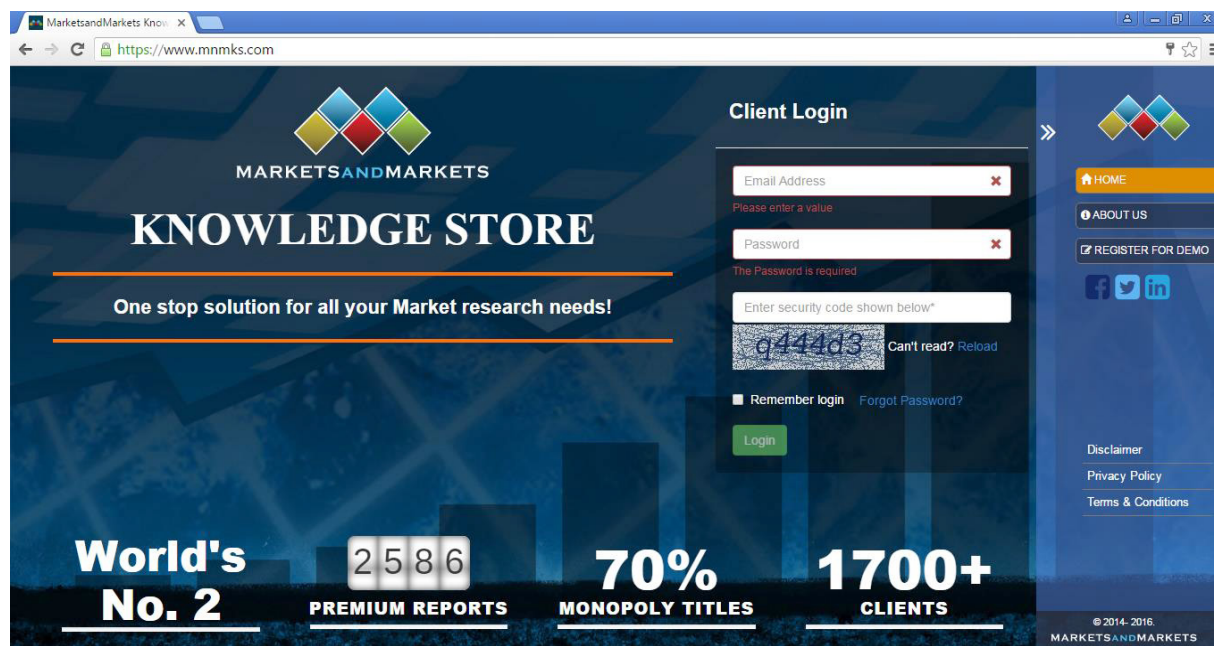
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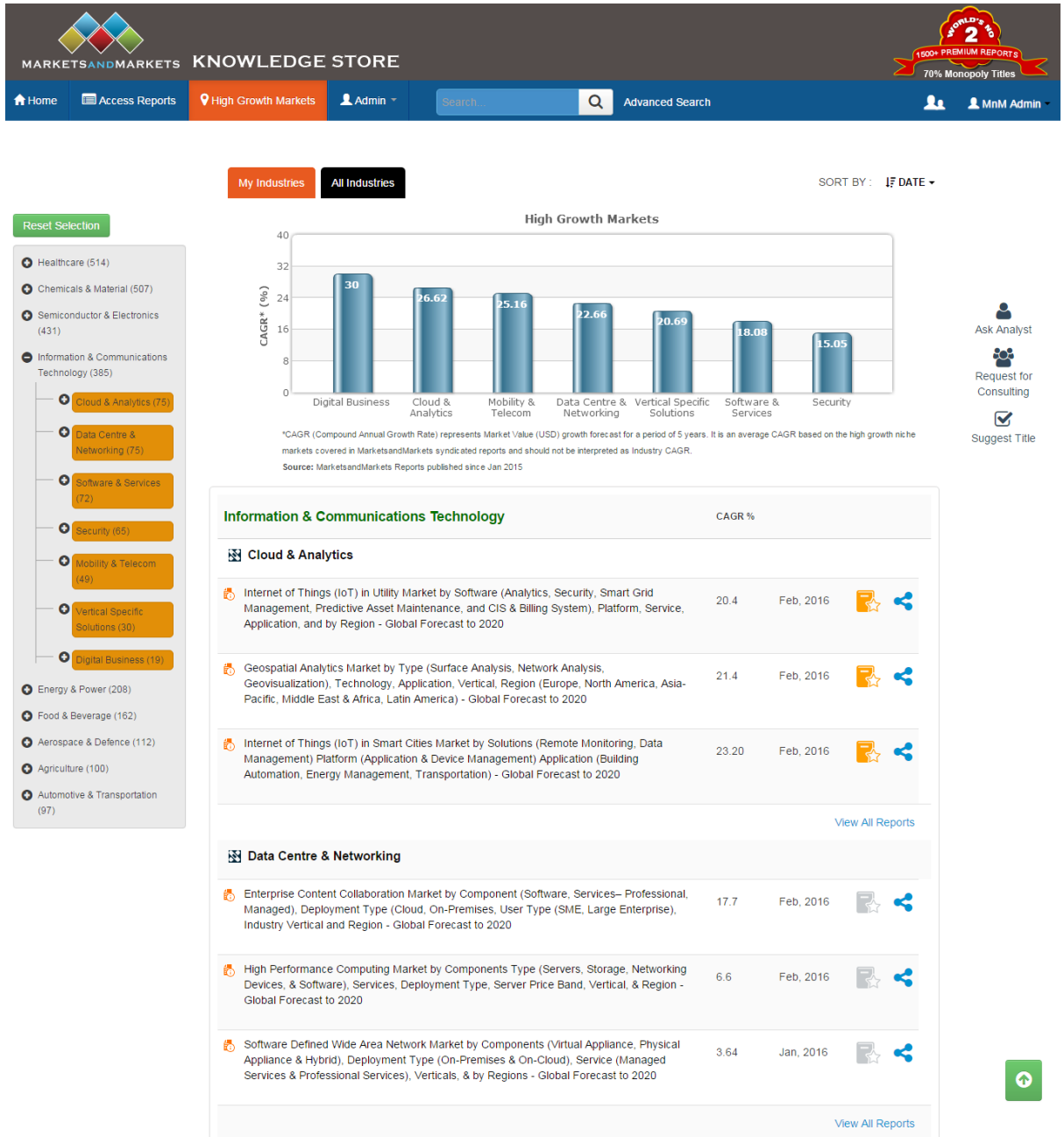
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