



# Innovative Technology for Insightful Impact

We can't solve problems by using the same kind of thinking we used when we created them

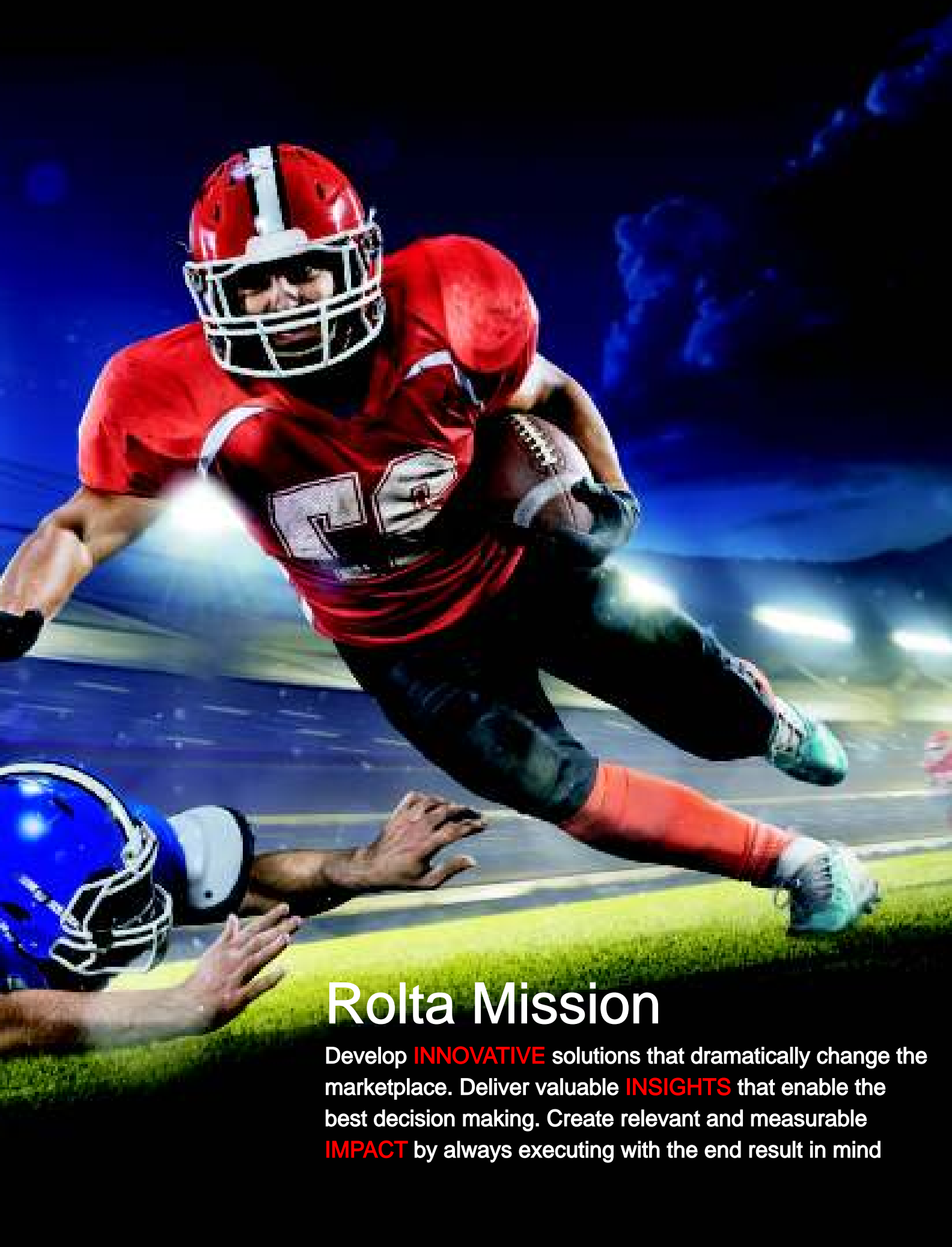
- Albert Einstein

## Rolta Vision

To continuously **INNOVATE** and provide knowledge-based IT solutions that deliver remarkable **INSIGHTS** and lasting **IMPACT** in the way our world operates

### Contents

Vision and Mission	01
Chairman's Statement	02
Innovation	04
Excellence	06
People	08
Alliances	10
Customers	12
Digital Transformation Solutions	14
Battlefield Management System	16
Defence & Security	18
Oil & Gas, Petrochemicals and Chemicals	24
SmartCity & Government	28
Utilities & Transportation	32
Manufacturing, Retail & Healthcare	36
Banking, Financial Services & Insurance	40
Shareholder Information	44
Ratios and Ratio Analysis	48
Board's Report	50
Corporate Social Responsibility	69
Auditor's Report	71
Consolidated Financial Statements	74
Auditors' Report on Abridged Financial Statements	106
Abridged Financial Statements	109
Corporate Governance	130
Business Responsibility Report	138
Risk Management	141
Management's Discussion & Analysis	142
Directors' Profile	146
Global Management Team	148
Corporate Information	152



# Rolta Mission

Develop **INNOVATIVE** solutions that dramatically change the marketplace. Deliver valuable **INSIGHTS** that enable the best decision making. Create relevant and measurable **IMPACT** by always executing with the end result in mind

# Chairman's Statement



Our lives are characterised by growing complexity and accelerated changes. We are moving towards networked societies where relationships are fluid, less predictable and implicitly defined. It is interesting to note how the pace of technology, its rapid absorption and the disruption it can bring is increasing day by day. The most significant change will not come from any one single technology, but from a combination and an interplay between multiple digital technologies like Cloud, Big Data, Analytics, Mobility, Geospatial, Artificial Intelligence, Augmented 3D Reality etc. The failure to foresee these changes in technology and their impact has resulted in some of the industry giants falling by the wayside and perishing.

Technologies like Internet of Things are creating a hyper-connected world around us which is generating a deluge of digital data. Cloud and Mobility on the other hand are providing organizations with the agility and pervasive access to this exponentially growing volumes of data. Artificial Intelligence and Machine Learning are emerging to crunch this Big Data for deriving penetrating insights and Analytics.

Rolta's Vision - 'To continuously Innovate and provide knowledge-based IT solutions that deliver remarkable Insights and lasting Impact in the way our world operates' has been deeply ingrained in the DNA of the Company. Guided by this vision, we have made significant investments to transform our business model to a predominantly IP led solutions model and in the recent years realigned all our development energies to these digital technologies that is powering the 4th Industrial Revolution.

Rolta's rich heritage of creating and designing digital repositories enriched with Geospatial as well as Engineering data has uniquely positioned the Company to analyse intricate data patterns and thereby extract the deepest insights from the digital data. Rolta invested in the Big Data Analytics technology ahead of the curve and today addresses the full spectrum of Big Data analytics maturity journey from initial advisory, data discovery, enablement of big data landscape, establishing an asset information model (AIM) to secure IoT integration and advanced analytics.

Another trend that is shaping the world is the substantial shift of population moving towards big and small cities with smaller towns and villages transforming into modern cities. Such demographic changes will have a significant impact on our future and will continue to pose a challenge in effectively managing scarce resources. The solution to this clearly lies in

building smarter and more intelligent cities. Rolta has built deep expertise and a rich portfolio of rapidly deployable Smart City solutions in diverse areas such as Economic Development, Urban Planning and Land Management, Transportation, Utilities and Smart Governance to name a few. This is enabling the Company to make inroads with multi-million dollar contracts, both in India and across the globe.

The modernization and digital transformation of the Indian Defence has been accorded a high priority for future procurements. Rolta has been the leading provider of C2ISR solutions to the Indian Army having addressed all echelons of command and continues to enhance its suite of products by incorporating next generation cutting edge technologies. The Battlefield Management System (BMS) project valued at about Rupees 70,000 crores aims to usher in Digital Transformation of the Indian Army. Rolta is proud to have been selected as a Development Agency in an exclusive consortium with BEL and continues to achieve major milestones within the stipulated time frames under the active support and guidance of the Indian Army.

Our transformation into an IP led organisation has resulted in the solutions continuing to win industry and analyst accolades as well as gaining global traction. The maturity and exceptional value of Rolta's Products and Solutions are clearly evident from the tremendous traction we have built. Our customer base now has several marquee clients who have adopted our Digital Solutions including 11 Fortune 500 companies and leading Indian Navratnas. Our customers also include several leaders in their industries. For example, 3 out of top 10 petrochemical and chemical companies 8 leading Oil & Gas, one of the largest water services company in UK, 3 of the Forbes global power companies, one of the largest retail chain stores as well as one of the largest Hi Tech manufacturer. Adoption of our solutions by these leading originations clearly vindicates our strategy.

We remain committed to driving innovation and making the necessary investments to remain relevant by building new product capabilities in technologies like Big Data and Analytics, Cloud, Mobility, Artificial Intelligence, and Machine Learning which is powering the Digital Transformation. I believe we are living in exciting times and in this era of digital transformation we have all the technologies coming together to allow us to build a Smarter World.



K. K. Singh  
Chairman & Managing Director  
August 17, 2017

# Innovation

It has always been our endeavor to focus all our energy to create new value for our Customers and Stake holders





Digital transformation has emerged as a driver of sweeping change in the world around us. Journalists today are comparing Digital Data in this 21st century as the new Oil. IoT and IIoT are creating a hyper-connected world around us which is generating a deluge of digital data. Cloud and Mobility on the other hand are providing organizations with the agility and pervasive access to this exponentially growing volumes of data. Artificial Intelligence and Machine Learning are emerging to crunch this Big Data for deriving penetrating insights and Analytics. Organizations who recognize the fundamental value inherent within the data and learn to extract it will be able to reap the huge benefits. Rolta has been charting a course to constantly transform itself to remain relevant in the face of relentlessly changing digital technologies and market needs while remaining focused on core competencies.

Rolta has always ensured that it moves with the times and remains at the cutting-edge of technology. The Company combines the domains of IT, Business Intelligence & Big Data, Geospatial & Engineering and Defence & Security to provide unique and highly differentiated solutions to its customers. Rolta has developed some very powerful software suites capable of seamlessly integrating IT, OT, geospatial and engineering data from disparate sources in an enterprise and present unified Business Analytics in real-time. Built around the Company's own IP and patented technologies, these solutions help position Rolta as a resilient market leader in its judiciously selected business segments in India and a key player worldwide.

Rolta continues to make investments in developing differentiating intellectual property (IP) targeted to this growing demand for Digital Transformation Solutions. The Company now owns a vast repository of around 250 registered copyrights for software packages powering the Company's differentiated Digital Transformation Solutions in the areas of Defence, Smart Cities, Cloud, Enterprise and Cyber Security as well as BI and Big Data Analytics. The Company's persistent efforts at developing cutting edge IP was recently rewarded with grants of two patents (No. US 9,594,955 B2 and No. US 9,378,417 B2) These new patents are a part of a series of patents filed by Rolta which uniquely differentiates Rolta's products giving them a competitive edge.

Enterprises are going digital, with over \$30 trillion in market capitalization across 8 key verticals including Energy and Utilities. Businesses need to be hyper connected in the ecosystem and generate real-time insights to remain relevant and succeed in the digital economy. While the majority of Big Data initiatives stop at processing unstructured human generated data, a vast volume of machine data remains untapped. By leveraging its IP and domain expertise, Rolta has put together a portfolio of offerings that can help a customer to work at any level of integration – 1X, 10X or 100X.

To achieve this, Rolta continues to build and expand its IP through the Rolta OneView™ Enterprise Suite for diverse asset intensive vertical segments. This BI and Big Data analytics solution provides integrated actionable insights across the enterprise for Diagnostic, Predictive & Prescriptive Analytics to support a variety of initiatives such as Operational Integrity, Asset Integrity, Operational Excellence, Change Management, Risk Mitigation etc. by delivering cross

## Innovation at Rolta means constantly setting new benchmarks

functional visibility and situation awareness, by employing at its heart a sophisticated Data Science Platform. Today, Rolta has established as a proven platform and converged solution provider for driving very large multi-million digital transformational programs such as Integrated Refinery Information Systems (IRIS), integrated manufacturing and operations management, digital oil field, smart grids, etc.

Rolta's Smart & Safe City Solutions continue to be enhanced to retain their competitive strengths not only for the domestic markets, but also to meet the global security and safety requirements. During the year Rolta SmartCity™ solutions portfolio was enhanced to incorporate an innovative combination of Rolta Command & Control™ with Rolta OneView™ framework for Analytics to address the emerging Smart City Operations Center requirements. Rolta OneView™ Smart City Operations Suite is an enterprise wide comprehensive solution that provides situational awareness of citywide infrastructure enabling diversified operations related to smart infrastructure monitoring, management of alerts / incidents received from multiple sensors and provide better living, safety and security to citizens. This comprehensive solution with embedded IoT integration and Spatial Fusion provides a 360-degree view of the citywide infrastructure together with situational awareness.

As one of the world leaders in Geographical Information Systems, this year Rolta joined a handful of companies worldwide, with the latest 64-bit release of its C4ISR software suite which brings sophisticated technology to fully exploit the latest advances in satellite and aerial imaging. This Next Generation ISR Solution seamlessly integrates Photogrammetry and Imaging with GIS to dynamically generate and display vast expanses of high quality imagery necessary for intelligence, operational planning and execution. This release sees several major enhancements for Data Creation supporting latest generation of satellites, multiple change monitoring algorithms to detect changes, Strategic and Tactical planning, Operational and Mission planning with a bevy of tools such as line of sight, Counter Infiltration and Counter Terrorism modules amongst others. These features and functionalities have been well received and appreciated at various levels across the armed forces.

The Company is also well-placed to seize the significant opportunities arising from the huge modernization programs of Indian Para-Military and Police Forces in the fast-growing Homeland & Maritime Security markets.

Rolta has consciously made efforts to remain at the forefront as a solutions provider with a sharp focus on the Digital revolution. Having made significant investments in the recent years, the Company today, is well positioned to address the huge Digital Transformation opportunities in the markets it serves.

# Excellence

Our Esteemed Clienteles are a standing testimony to the value that we have generated for their Organisations





Businesses today are no longer satisfied by automating business transactions but are looking for Business Outcomes to remain relevant and succeed in the Digital Economy. This revolution is being fueled by technologies such as the Cloud, Mobility, Enterprise / Cyber Security, Internet of Things (IoT) and Big Data Analytics, amongst others. With over 80% of digital data having a locational context, adding a geospatial dimension is vital for deeper insights. Rolta with its growing portfolio of innovative solutions is building enduring relationships with its customers embarking on their Digital Transformation journey.

Rolta has been charting a course to constantly transform Rolta to remain relevant in the face of relentlessly changing digital technologies and market needs while still remaining focused on core competencies and transition from Services to a predominantly IP led Solutions organization. With its large portfolio of IP, deep industry domain knowledge together with decades of Geospatial, Engineering and Enterprise IT experience and the ability to deliver end-to-end solutions, Rolta is well suited to help organizations in their digital transformation journey.

Rolta focuses on high-end IP led Digital Transformation solutions targeted at select industry verticals including India Defence and Security, Government, Smart and Safe City, Oil & Gas, Petrochemicals, Utilities, Transportation, Manufacturing, Retail and Healthcare.

Customers are increasingly looking for a single vendor capable of designing, delivering, optimising and subsequently managing their Enterprise wide solutions. The Company has established an enviable track record and is capable of designing, building, optimizing and subsequently managing these solutions for its customers as a single vendor.

Rolta addresses the full spectrum of Big Data analytics maturity journey from initial advisory, data discovery, enablement of big data landscape, establishing an asset information model (AIM) to secure IoT integration and advanced analytics. Rolta's unique IP is a vital differentiator in automating several aspects of this journey. Rolta's flagship enterprise product continues to remain at the leading edge with innovations such as AI, Machine Learning, Data Lake and Predictive Analytics. As a result, Rolta OneView™ continues to win industry and analyst accolades as well as gaining global traction. The maturity and exceptional value of Rolta's Products and Solutions are clearly evident from the tremendous traction built by Rolta over the years with more than a 100 BI and Big Data Analytics customers worldwide. This customer base includes several marquee clients who have adopted Rolta's BI and Big Data Analytics Solution for their Digital Transformation including 11 Fortune 500 companies and 2 Indian Navratnas. What is even more encouraging is that Rolta's BI and Big Data customers span across all the asset intensive industries served by the company. For example, 3 out of top 10 petrochemical and chemical companies 8 leading Oil & Gas, one of the largest water services company in UK, 3 of the Forbes global power companies, one of India's largest gas distribution company and several Department of Transport in US & Canada and a leading smart transportation authority in the Middle East chose to partner with Rolta for their Big Data analytics.

The Company's IP-led solutions in the area of Big Data Analytics have received excellent reviews in the industry from

We don't just  
deliver a Product,  
we deliver an **Experience**

customers, partners and leading analysts like Gartner, Frost & Sullivan, and ARC.

Rolta's flagship, Rolta OneView™, a BI and Big Data Analytics solution, continues to grow from strength to strength and is gaining high traction amongst the world's leading organizations as well as global acclaim. In a recent Gartner report, 'Take Advantage of the Disruptive Convergence of Analytic Services and Software, the analyst has cited, "These converged offerings typically have a strong "domain" focus — targeting a specific business problem or process or a vertical market segment. Examples include SAS' retail analytics, Accenture's fraud analytics platform, and 'OneView™', an analytics platform that can be tuned for specific verticals such as oil and gas, petrochemicals and power."

Rolta was recently awarded the 'IT Solutions Provider of the Year - Oil & Gas, 2016' for the second consecutive year. This award acknowledged Rolta's leadership in providing Oil and Gas industry with innovative solutions that help overcome the challenges posed by a volatile and complex environment by leveraging Data Science and Machine Learning, to deliver spatially-enabled Predictive and Prescriptive Analytics. The Rolta OneView™ solution deployed by one of the largest Oil & Gas exploration and production company in India, recently won the Geospatial World Excellence Award selected by an eminent panel appointed by Geospatial World Forum. They chose this solution from a selection of over 30 nominations across the globe. This Rolta OneView™ solution stood out for its geospatial enabled enterprise business intelligence, predictive analytics and operational excellence with a focus on improved capacity and energy utilization of assets, risk management, improved safety and maintenance practices and supply chain optimization.

In the geospatial domain, Rolta has developed some unique suites of IP that have enabled the Company to significantly enhance the value customers can derive from their geospatial data assets. Rolta has successfully implemented sophisticated solutions for geospatially enabled business intelligence and analytics solutions by leveraging the combination of its Geospatial domain knowledge, its IP stack, and IT expertise – something quite unique to Rolta.

Rolta was bestowed the Geospatial World Leadership Award in the category of 'Geospatial Solutions Company of the Year'. This recognition was on account of Rolta's strengths in successfully integrating and aligning its geospatial expertise with Data Science, IT, Engineering and Communication technologies to unleash the power of location and geospatial information across business, enterprises and government functions.

Rolta's consistent endeavor to provide innovative solutions and exceptional value to customers has resulted in increased margins, higher customer loyalty and improved annuity revenues.

# People

At Rolta, the best teamwork comes from people who are working independently towards one goal in unison

