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Background and Company Performance

Industry Challenges

Frost & Sullivan recognizes that the race for creating smart, connected and sustainable cities has gained momentum in the last few years, especially in the emerging nations. There is, hence, a lot of activities among large conglomerates to lead the initiative. However, there are four key challenges that participants within the smart and connected ecosystem market need to address. The first and foremost challenge pertains to generating capital funds and making them flow continuously throughout the project. Sometimes, considering the time frame of the project, the generation of funds is easier when compared to making it available at the end of the project.

The second challenge pertains to one of the topical issues among the market participants, that is adopting new business models to monetize and scale the smart and connected communities’ solution in order to make an impact on the $19 trillion value at stake as identified by Cisco.

The third challenge relates to creating trust in the minds of customers on Return on Investment (RoI). Currently, the smart and connected communities’ solution is seen as the only solution that is capable of invigorating the urban economy by enhancing the productivity of an individual or an organization. By considering the solution as a long-term proposition, it is imperative to focus on providing insights to customers on RoI and also to showcase the abilities and functionalities of the solution by developing pilot models. Lastly, the smart & connected communities’ solution includes a cluster of elements in terms of both technologies and industries that need to be brought under a single framework in order to develop a holistic solution boasting an advanced architecture such that it effectively addresses all the existing and emerging challenges.

Therefore, in this context, companies that effectively use their visionary excellence to devise competitive strategies and provide advanced architecture of solutions find themselves able to successfully address the aforementioned challenges and stay competitive in the market.

Cisco’s Focus on the Future and Best Practices Implementation

Focus on Unmet Needs

Being a visionary thought leader in the area of smart and connected ecosystems, Cisco has been collaborating with public the sectors of many countries, such as The United States of America, Spain, Saudi Arabia, and more recently, with India, over the past 11 years. The collaborative approach has been followed by Cisco to revitalize the cities and
their communities with smart and connected solutions for energy, healthcare, citizen services, education, financial services, as well as public safety and security. The primary reasons to start a business unit in smart and connected communities solutions are because of four key trends: a significant shift in demographics, the demand for citizen services, the rapidly growing internet population and the shift in economy from developed to emerging nations. Cisco, being a constant innovator and differentiator, rightly realized the increasing penetration of devices, projected to reach 50 billion in 2020, and the affordability of internet access in today's world. Therefore, it is more focused on expanding its ability to provide information and communications technology (ICT) solutions to all the six sectors mentioned above. For example, in the public safety and security sector, it is motivated to provide pointed solutions capable of converting video feeds into a decision-making platform, to a city where the availability of video services, video analytics and response time for any incidents in the city is minimal. Frost & Sullivan's benchmarking analysis shows that the primary differentiator in Cisco’s smart and connected communities’ solution is the superiority in the design of the solution. It is a nodal-operating platform based on an open architecture that has the ability to provide virtual services and useful information to both wired and wireless devices of an individual or an enterprise, on a day-to-day basis.

**Visionary Scenarios through Mega Trends**

Cisco is a rigorous follower of mega trends and leverages them for identifying potential growth opportunities in the market. Some of the mega trends that Cisco follows are urbanization, connectivity and convergence, ‘smart’ is the new green and game changers beyond Brazil, Russia, India and China (BRIC).

Leveraging of all the four aforementioned topical mega trends have led Cisco to launch specific ICT activities in the field of Internet of Things (IoT) and Internet of Everything (IoE) in the year 2014.

For example, in May 2014, Cisco and the city of Kansas have jointly signed a letter of intent (LoI) to develop a living lab, which outlines a framework for specific pilot projects on deployment of smart street lighting, smart video surveillance, environment and infrastructure sensing and citizen engagement services solutions.

Similarly, in July 2014, Cisco and Barcelona City Council announced their plan of developing a global IoE innovation center in Barcelona to host two kinds of activities. The first activity is to design new services and solutions for smart cities that are in the early stages of development. The second activity is to showcase the ability of smart and connected communities’ solution to improve citizens’ quality of life.

Likewise, in July 2014, Cisco and Electronics City Industries Association (ELCIA) announced a strategic engagement to develop a living lab in Bangalore, which is Asia’s
first end-to-end IoT innovation hub that will provide both network infrastructure and expertise to enable the testing of the electronic product prototypes of an IoT-enabled smart city environment. The above-mentioned innovation centers will help both public and private companies understand how to extract value from the IoE.

The above examples overtly show Cisco’s ability to initiate activities by leveraging mega trends and identifying potential cities for smart and connected communities’ development. In addition to the above examples, Cisco’s target for global business beyond developed nations is BRIC, Mexico, Turkey, Indonesia, Poland, South Africa and Saudi Arabia (TIPSS), as well as Ukraine, Qatar, Vietnam and Malaysia.

**Blue Ocean Strategy**

The decisive and irreversible trend of increasing demand for intercommunication of devices and high-speed data exchange was rightly identified by Cisco. Therefore, it was keen on offering a breakthrough value to customers in the form of IoE, which is a next-generation networking environment with fast data exchange capabilities. Cisco is now integrating the IoE in its smart and connected communities’ solution, thereby creating opportunities in this high growth market.

The end users of smart and connected communities’ solutions can be segmented into two broad categories: namely, the commercial sector and the residential sector. Cisco is, currently, leading the commercial space by addressing some of the common disparities in intercommunication between devices of different manufacturers by offering an integrated platform. The trend of developing a standard common platform for all devices to intercommunicate and exchange data is gaining momentum. This is because it helps customers buy devices or appliances from different manufacturers and still exchange data between those devices, thereby improving productivity without the incurrence of additional cost.

Cisco, besides its involvement in the commercial space, has also entered the residential space though its channel partners, for providing smart and connected home solutions. Further to this, Cisco cashes on the opportunity of providing data center solutions to mobile communication service providers, as they are the main service providers for home automation solution in terms of wireless communications and high-speed internet. Frost & Sullivan’s analysis confirms that Cisco maintained a revenue share of about 18.3% of its total product revenue in data center and service provider video infrastructure solutions during the year 2013-14.

**Growth Performance**

Cisco, being a manufacturer of internet protocol (IP) networking products and services related to communications and the Information Technology (IT) industry has customers
from diverse sectors. Cisco is also offering key strategic services to partner companies on how to convert the value at stake in the IoE into revenue and connect the unconnected. Cisco identifies a $19 trillion value at stake in both enterprise and public sectors from 2013 to 2022. The value at stake can be broken down further by $14.4 trillion for the enterprise sector and $4.6 trillion for the public sector. However, Cisco is more inclined towards impacting the value at stake of the enterprise sector. Therefore, it is keen on impacting the $14.4 trillion value by improving on the following key areas: asset utilization, employee productivity, supply chain and logistics, customer experience and innovation in reducing time to market.

In addition to this, Cisco recognized that the value at stake in each of the above-mentioned areas is almost equally distributed. Hence, it is intent to improve its business processes by both cost-cutting and revenue-raising activities. Therefore, Cisco is focusing on improving the technology-enabled security capabilities and processes to protect the privacy of the company and customer information in order to benefit from the IoE economy’s future growth potential.

**Operational Efficiency**

There is an increasing pressure on all organizations to reduce operating cost due to the increasing fluctuations in the global economy. Therefore, it is necessary for any organization to improve the operational efficiency of its business processes to handle the internal and the external pressures on the company. Frost & Sullivan notes that Cisco, being a visionary leader, has developed a 10-step cost-saving strategy to improve its operational efficiency. Cisco believes that to introduce any change to the company’s business model, it needs to exploit the potential of ICT to the fullest. Cisco’s ‘One Cisco’ program focuses on ‘spend less and deliver more’ strategy, which explains how to spend less on the delivery of ICT and how to deliver more using the transformative effect of ICT on the areas such as workforce, workplace, energy and resources. The 10-step strategy includes:

- Design and management of an enterprise network that offers seamless user connectivity with unified access, security infrastructure and end-user mobility.
- Agile, secure and cost-efficient delivery points through consolidation and virtualization of data center infrastructure.
- Migration to virtual desktop infrastructure (VDI), which provides significant cost reductions in the area of software licensing and help desk management.
- Enabling location independence through a network for mobility, unified access and bring your own device (BYOD).
- Unify workforce communications by converging voice and data services and implementing unified communications, which will deliver immediate total cost of ownership savings to the capital costs and the operational costs of the equipment.
- Transformation of physical meetings into virtual meetings through implementation
of web-based collaboration tools, like WebEx.

- Exploitation of business videos, such as video enabled desk-to-desk IP telephony, room-based video systems and TelePresence systems, to enrich all forms of business communication and to facilitate virtual meetings.
- Creating a connected workplace for location independent workers to access information, applications and services on an ‘anytime-anywhere’ basis.
- Implementation of smart connected building management to reduce capital costs, operational costs and energy costs for new and refurbished buildings.
- Introduce energy management to monitor and control the use of energy by devices that draw energy from their network connection.

Cisco, by adopting and effectively implementing all the aforementioned strategies, has reduced its annual operating cost by more than $1.5 billion for the past 5 years.

**Technological Sophistication**

Being a primary differentiator in terms of investing and setting up an innovative working environment, Cisco has created best-in-class executive and customer briefing centers around the globe. This briefing center is a place where customers will believe and experience the ‘know-how’ on Cisco’s innovative solutions addressing the critical business challenges. For example, Cisco’s 2.18 million square feet smart campus in Bangalore is the most advanced global briefing center, which showcases a digitally connected and sustainable environment. The smart campus includes an evolving digital environment that caters to the needs, which is the work-live-play-learn scenario, of Generation-Y (Gen-Y) employees, location independence for employees with higher degree of personalization, higher utilization of TelePresence that connects 600 Cisco offices globally along with the location of partners and clients, secured transportation for employees with Global positioning System (GPS)-connected transport buses and vehicles equipped with radio frequency identification (RFID) tracking system, smart and connected parking facilities, five cafeterias equipped with ‘connected cafe’ solution and the accommodation capacity of 6000 employees at a time, leadership in energy & environmental design (LEED) platinum-certified buildings in the campus, energy generation up to 1MW by roof-top solar panels in the campus, and filled with collaborative workspaces for Gen-Y employees.

Frost & Sullivan firmly believes that the above-mentioned technology-enabled business processes of a Cisco briefing center showcases the company’s clear vision of how business will be done in the future.

**Conclusion**

Frost & Sullivan’s independent analysis clearly shows that Cisco is recognized as a company that enables transformation within a country by way of thinking, innovating and executing things for the benefit of humanity. Cisco’s formation of public-private
collaborative alliances on developing smart and connected communities around the globe evidently demonstrates its vision of delivering platform-oriented and advisory solutions in the future. In addition, Cisco has made monumental efforts in assisting its partners and the public sector in making them understand the significance of IoE value drivers, value at stake and value index. This quality of sharing its best practices to its partners has established it as a more socially and environmentally responsible conglomerate in the new era of connectivity than before.

With its strong overall performance, Cisco has earned Frost & Sullivan’s 2015 Global Visionary Innovation Leadership Award.
Understanding Visionary Innovation Leadership
A visionary innovation leadership position enables a market participant to deliver highly competitive products and solutions that transform the way individuals and businesses perform their daily activities. Such products and solutions set new, long-lasting trends in how technologies are deployed and consumed by businesses and end users. Most important, they deliver unique and differentiated benefits that can greatly improve business performance as well as individuals’ work and personal lives. These improvements are measured by customer demand, brand strength, and competitive positioning, as explored further below.

Visionary Innovation is the ability to innovate today in the light of perceived changes and opportunities that will arise from Mega Trends in the future. It is the ability to scout and detect unmet (and as yet undefined) needs and proactively address them with disruptive solutions that cater to new and unique customers, lifestyles, technologies, and markets. At the heart of visionary innovation is a deep understanding of the implications and global ramifications of Mega Trends, leading to correct identification and ultimate capture of niche and white-space market opportunities in the future.
Key Benchmarking Criteria

For the Visionary Innovation Leadership Award, Frost & Sullivan evaluated two key factors—Focus on the Future and Best Practices Implementation—according to the criteria identified below.

Focus on the Future
- Criterion 1: Focus on Unmet Needs
- Criterion 2: Visionary Scenarios through Mega Trends
- Criterion 3: Growth Pipeline
- Criterion 4: Blue Ocean Strategy
- Criterion 5: Growth Performance

Best Practices Implementation
- Criterion 1: Vision Alignment
- Criterion 2: Process Design
- Criterion 3: Operational Efficiency
- Criterion 4: Technological Sophistication
- Criterion 5: Company Culture

Best Practice Award Analysis for Cisco

Decision Support Scorecard

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows our research and consulting teams to objectively analyze performance, according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are illustrated below.

RATINGS GUIDELINES

The Decision Support Scorecard is organized by Focus on the Future and Best Practices Implementation (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criteria are provided beneath the scorecard). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.
The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, Frost & Sullivan chose to refer to the other key players as Competitor 2 and Competitor 3.

DECISION SUPPORT SCORECARD: VISIONARY INNOVATION LEADERSHIP AWARD

<table>
<thead>
<tr>
<th>Measurement of 1–10 (1 = poor; 10 = excellent)</th>
<th>Visionary Innovation Leadership</th>
<th>Focus on the Future</th>
<th>Best Practices Implementation</th>
<th>Average Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cisco</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Competitor 2</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Competitor 3</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

**Focus on the Future**

**Criterion 1: Focus on Unmet Needs**
Requirement: Implementing a robust process to continuously unearth customers’ unmet or under-served needs, and creating the products or solutions to address them effectively

**Criterion 2: Visionary Scenarios through Mega Trends**
Requirement: Incorporating long-range, macro-level scenarios into the innovation strategy, thereby enabling “first to market” growth opportunities solutions

**Criterion 4: Growth Pipeline**
Requirement: Best-in-class process to continuously identify and prioritize future growth opportunities leveraging both internal and external sources

**Criterion 3: Blue Ocean Strategy**
Requirement: Strategic focus in creating a leadership position in a potentially “uncontested” market space, manifested by stiff barriers to entry for competitors

**Criterion 5: Growth Performance**
Requirement: Growth success linked tangibly to new growth opportunities identified though visionary innovation

**Best Practices Implementation**

**Criterion 1: Vision Alignment**
Requirement: The executive team is aligned on the organization’s mission, vision, strategy and execution

**Criterion 2: Process Design**
Requirement: Processes support the efficient and consistent implementation of tactics designed to implement the strategy

**Criterion 3: Operational Efficiency**
Requirement: Staff performs assigned tactics seamlessly, quickly, and to a high quality
standard

**Criterion 4: Technological Sophistication**
Requirements: Systems enable companywide transparency, communication, and efficiency

**Criterion 5: Company Culture**
Requirement: The executive team sets the standard for commitment to customers, quality, and staff, which translates directly into front-line performance excellence

**Decision Support Matrix**
Once all companies have been evaluated according to the Decision Support Scorecard, analysts can then position the candidates on the matrix shown below, enabling them to visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels.

**DECISION SUPPORT MATRIX: VISIONARY INNOVATION LEADERSHIP AWARD**

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"We Accelerate Growth"
The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan’s 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often, companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best in class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 40 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.