Vol. 2

SYMBIOSIS INSTITUTE OF DIGITAL AND TELECOM MANAGEMENT

[Formerly SYMBIOSIS INSTITUTE OF TELECOM MANAGEMENT]

CONSTITUENT OF SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

Established under section 3 of the UGC Act, 1956 I Re-accredited by NAAC with 'A' Grade (3.58/4) I Awarded Category - I by UGC

CASES IN DIGITAL & TELECOM TECHNOLOGY MANAGEMENT

SYMBIOSIS INSTITUTE OF DIGITAL AND TELECOM MANAGEMENT

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SYMBIOSIS

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CA. Dr. Abhijit V. Chirputkar
Director, SIDTM

SIDTM's Case Studies in Digital and Telecom Management, the student journal of SIDTM, aims to motivate the students to learn and do research in the area of cases in the niche domain. Students will be writing case studies in the current areas of technology management which is changing very fast.

It is observed that cases in functional domains are available for students to learn; however case studies in the niche domain such as technology management are rare. Technology keeps on changing and so are the areas of technology usage in different sectors and industries. Digital transformation is affecting all industries and it is interesting to study the cases from this evolving field.

This will help students keep abreast of the current happenings in the area of Digital Technology Management and also help dissemination of knowledge, information and learning. Students are expected to have an enriching and life-turning experience which will enable them to reach new heights in their professional life. We at SIDTM foster sharpening of skills and enhancement of knowledge base in our students through various extra-curricular, co-curricular and curricular activities through faculty who not only keep themselves at par with the current developments, but also contribute to the expansion of the body of knowledge in their field of expertise. With very congenial and professional environment our faculty makes substantial contribution to the academia through quality teaching, publications, seminars, conferences, etc.

To facilitate this, SIDTM has been publishing Prevision- An Annual Telecom Forecast, Telecom Business Review Journal and Prayukti. To enhance domain specific knowledge among members of faculty and among students in the areas of case studies, SIDTM has come out with this new publication.

EDITOR'S MESSAGE

Dr. Sujata Joshi
Professor & Faculty incharge of Research & Publication, SIDTM

SIDTM-Student Case Folio: Cases in Digital and Telecom Technology Management" started in the year 2019, is an initiative by the institute to expose students to the nuances of case study writing and developing technology solutions to address the problems faced in these case studies. SIDTM is a techno- management business school that has remarkably evolved into a center for learning and excellence in the digital & telecom technology management domain. At SIDTM, we focus on Digital and Telecom management. The curriculum consists of core management subjects and is applied to digital technology management through case studies. While searching for case studies it was observed that although many case studies are available in the management domain there are very few magazines or case books which offer technology management case studies. SIDTM took this challenge as an opportunity to develop cases studies in the technology management domain which can be used in the classrooms.

Students were involved in this case study writing project. A set of 2 or 3 students under the mentorship of a faculty mentor took up problems or issues faced by companies, farmers, manufacturers etc. and how these could be resolved using technology solutions. This initiative proved to be a good learning experience for the students as they could relate how technologies can be applied to resolve problems faced by organizations. A brief abstract of these case studies has been printed in the form of a booklet which has been named as "SIDTM-Student Case Folio: Cases in Digital and Telecom Technology Management". The Volume 1 of the Case book was released in 2019. This volume contains abstracts of case studies on different techno-management topics such as: Implementation of AI ML In Dairy Sector, Technological Advancements in the Dairy Industry, Comprehensive Description on Automated, Hydroponic Indoor Farming System using LEDs, Cattle Health Events or Diseases and many more.

The full case studies will be made available on request.

On behalf of the SIDTM, we would like to take this opportunity to express our gratitude to all the Professors for their support and guidance and to the students who have directly or indirectly contributed to the magazine

PREFACE

Symbiosis Institute of Digital and Telecom Management works towards developing techno-managers by exposing the students to latest technology, enabling them to manage the technological aspects of an organization.

As a part of a Digital and telecom business school, that has adapted and catered to the needs of the ever-changing Digital Technology (ICT) industry, it gives us an immense pleasure to release the case study journal. The success of the lies in the collaborative efforts of the team members, students, and the faculty members.

The latest trends of ICT industry are researched and are brought out through insightful papers. This edition comprises of case studies in the technology management domain. The areas of focus are: Telecom, IoT, Cloud Management, Cyber Security, Forensics, Block chain Technology, Digital Transformation, data-driven marketing, electronic smart systems and drones etc. On behalf of the editorial board, we would like to take this opportunity to express our gratitude to all the Professors for their support and guidance and to the students who have directly or indirectly contributed to the magazine. We would love to hear your suggestions that could help us with the future editions.

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Walmart - Flipkart Merger

Abhiraj Kumar, Tapas Kumar Saha, Abhishek Kataria, Nithya S, Parvathy Madhavan, Abhijit Majhi, Sayandeep Mandal, Priyanka Kumari Raj

Flipkart is one of the leading e-commerce marketplaces in India followed by Amazon India. Following a 20 month talk between the two companies, Walmart and Flipkart came to a conclusive deal in May 2018. Later, a booming e-commerce deal between Flipkart and Walmart took place, which became the most pivotal deal in the history of e-commerce in the World. Walmart procured a staggering 77% shares of Flipkart at an estimated cost of US $16000 Mn (Rs 1,10,072 crores). The report gives a complete analysis of the merger from – Why the merger took place, before and after analysis of the merger, the effect on the competitors and its cultural impact. We will try to understand the impact on this merger on the Indian economy as well as the financials involved in this merger.

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2. CS02
Bittium Tough Mobiles

Alankar Mishra, Kushagra Chaudhary, Samiksha Chitranshi, Revathy Rajendra Prasad, Priyanka Gaur, Suyash Rai, Ankit Mondal

Bittium is specialized in designing reliable, secure communication and networking solutions, leveraging its more than 30-year history of advanced radio communication technology expertise. Bittium provides innovative products and services based on its product platforms, customized solutions, and R&D services. Bittium provides validated information security solutions for mobile devices and portable computers, in addition to its communications and networking solutions. Bittium also provides healthcare technology products and services in the fields of cardiology, neurology, rehabilitation, occupational health, and sports medicine for bio signal analysis.Net sales were 62,8 million euro in 2018 and operating profit was 2.8 million euro. Bittium appears on the Nasdaq Helsinki list. Bittium provides reliable and safe networking, tactical communication, and bio signal control solutions. The business divisions of the organization include the telecommunications, the Internet of Things, and the defense industries.

3. CS03
Ransomware Cases- Analysis

Anuj Suman, Arijit Das, Athul P, Yeshu Kashyap, Sanchi Dhingra, Sanika Gokhale, Shubhangi Dighade

Ransom Malware, or Ransomware, is a type of cyber-attack that stops users from using and working on their system or personal documents and in return also claim for a ransom payment to recover access. The previous versions of ransomware were started in the late 1980s, and payment method was to be via mail which were nailed. In present scenario, ransomware creators command that payment be done via cryptocurrency or credit cards. There are various methods that ransomware can enter your computer. One of the most used methods today is that of phishing and spam messages, or mal oriented spam, which is an un-invited email that is used as a delivery method for virus. The email or message include booby-trapped attachments which are harmful, such as PDFs or Word documents. It also contains retracements to malicious websites through links. The cases analyzed for the study are those cases in which ransom was paid to get out of the attack.

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4. CS04
Augmented Reality Advertising on Brand Equity Using Keller's Brand Equity Model
Sai Aashish CH, Laxmikanth Rane, Shreya Rawat

Advertising is one of the most important aspects to create brand awareness among masses. Digital technologies offer many opportunities in design and implementation of brand communication and awareness. Augmented reality is an innovative technology in marketing communication which can help consumer to experience the product virtually even before buying the product. In present case study the basic difference between Augmented reality advertising and traditional advertising is explained. Keller's brand model is utilized to understand how organizations like coke and National Geographic channel have put AR advertising in use to communicate their brand. It was seen that not only it helped in strengthening of brand but also AR ads have helped in creation of social awareness. Nevertheless, AR in advertising is still in its nascent stages thus scientific findings about impact of AR on brand equity measurement are rare.

5. CS05
Electric Wheels: A deep dive of the case of Mahindra Reva
Suman Sahoo, Kapil Bahare, Shreya Singh

Mahindra and Mahindra acquired Chetan Maini's Reva Electric Car Company by acquiring majority stake of 55% for 45 crores. In this way the automobile giant expressed its intention of an untapped market of electric cars in India. However, that did not work out as expected as on March 31, 2019, Mahindra and Mahindra stopped production of Reva e2o plus, India's first electric car. The objective of this case study is to analyze and understand the factors which lead to decline and subsequent shut down of Mahindra Reva. It will also help us understand the reason of low road share of Electric cars in India.

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6. CS06
Google Stadia: Arrival of Cloud Gaming Services in Gaming Market
Chitransh Bushal, Jayant Kumar Ratre, Choudhary Tejas Jagdeesh, Srishti Sharma

Stadia is a first-ever cloud gaming service, launched in November 2019. It is set off by Google, known to be capable of streaming video games up to 4K resolution at 60 frames per second with support for high-dynamic-range. However, the biggest challenge for Google is to shift gamers from traditional gaming consoles (Xbox, PlayStation, etc.) to the cloud platform. The objective of this case study is to understand the marketing strategy, technological features, and competitors of Google Stadia; and how it will affect gaming developers and Telecom Industry. This case highlights promotional strategies which Google Stadia is using to suppress its competitors, i.e., Sony Interactive Entertainment's Play Station Now service, Microsoft's Xbox Project xCloud, Apple's arcade etc. along with its unique technological offerings such as cloud computing, live streaming of games with high dynamic support and cross-platform operating system

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7. CS07
Implementation and Penetration of 'Bounce' Rental Bike Service in India

Sukriti Singh, Suman Acharya, Harsh Kumar Sengar

Bounce (formerly known as metro bikes), launched in 2016, India's first mobility solution, is a Bengaluru based dock less bike sharing startup that provides scooters for a short period of time to people usually for few hours with a very nominal fare price of 5 per km or 0.5 per minute and with a mission of making daily commute stress-free, time Bounce's bike rental plans - commute (assured bike everyday) and short ride (pick and drop anywhere) are aimed at encouraging commuters across all genders to opt for shared and public transport, and in doing so, reducing traffic congestion and carbon emission keeping environment safe from global warming effects.

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8. CS08
Ather Energy

Shubhanshu Sharma, Himanshu Singh, Kamble Shubham Suryakant, Sweety Chatterjee, Aarushi Prasad, Tetali Monica, Himanshu Suresh Maurya

Ather Energy is a Bengaluru-based start-up which began their journey in 2013 with an objective to build high quality, smart electric scooters. The company was founded by Mr. Tarun Mehta and Swapnil Jain with the prime agenda being the change of perspectives about electric scooters by providing consumers with high performance, zero maintenance and smart electric vehicles. The company entered the market with a product named Ather 450 in Bengaluru. It took up only online purchase model with the provision of doorstep services. It has set up DC-fast-charging stations and this network of multiple charging points is formulated as Ather Grid.

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9. CS09-
The Hostile Acquisition of Mindtree by L&T

Inarkar Swakush Suryakant, Akash, Jayanto Chowdhary, Manan Tewari, Thacker Anjali, Triveni Mishra, Udgave Akshaya Shantinath

L&T invested into almost 60% of Mindtree's equity (shares) attempting to gain

majority stake over at Mindtree. The Mindtree founders heard one co-founder but opposed any deal with a peer such as L&T InfoTech. Instead, they suggested selling blocks in the secondary market or to a clutch of private equity investors with no board seat or rights. Through this case an understanding has developed for why the deal had to go through despite the opposition of Mindtree's management.

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10. CS10
The Slowdown in The Indian Automobile Industry
Joshi Aamod Sudhir, Kishore Goutham K S, Bujade Kshitij Sushil, Varsha Ganjoo, Varsha Menon, Richa Kanaujia, Arbind Kumar

Germany and France were the first to invent the automobile by the end of 1800's. But Americans came quickly into existence and to dominate the automobile industry in the start of 20th century. Henry Ford developed the mass production technique. Then Ford and General Motors started using the same technique. Few American manufacturers produced 2,500+ motor vehicles in the start of 1900's and around 485 companies entered the business in the next 10 years. The case study highlights the slowdown in Indian automobile industry in an analytical way.

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11. CS11
Mobile Payments in India
Febin Peter Franklin, Loyal Andrade, Verda Nizam, Vinita Malviya, Souradipta Chowdhury, Sonali Pattanaik, Malay Ajay Bhagwat

Mobile payments are evolution of e-payment schemes that facilitates mobile commerce. A mobile payment or m-payment is where a mobile device is used to initiate, authorize and approve an exchange of financial value in return for goods and services. The past two decades have built solid foundation and next two years are expected to witness a leap and contribute to Digital India. The case study presents the impact of mobile payments in India

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12. CS12
Apple Smart Watch for Health Care Management

Nishant Shekhar, Mohit Borthakur, Mohit Sisodiya, Yashi Saxena, Patil Ajinkya Pandurang, Bodhanwala Armin Hosang, Nandanwar Rutuja Harish

In this case study we have focused on functions of a smart watch with focus on Apple watch and will try to analyze how it is different from others. It was launched in the year 2015 and has a Global Smart Watch Market Share of 51%. It is successfully delivering services like steps, burnt calories, stand Ring (Minutes standing versus sitting down), Distance, Heart-rate Sensor. There are many other players in the market focusing on similar services. The various competitors in this field are Samsung Galaxy Watch Active, Fossil Sport, Fitbit versa etc.

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13. CS13
Legitimacy building and e-commerce platform development in China: The experience of Alibaba

Aakanksha Budhraja, Swapnil Dalal, Tanvi Hazarika, Patil Abhishek Ravindra, Kanse Tushar Sambhaji, Pranav Ravindranathan, Pranendu Maiti

Alibaba is currently the biggest giant in the market with a revenue growth of 42% and 654 million active consumers. Alibaba paving its way through artificial intelligence and big data and successfully launched a new interface which creates a unique shopping experience by looking at behavior and consumer trends of every user. Alibaba is also known as "e-commerce brain' as it uses real-time data online which can predict what are the wants of the consumers by looking into the search history and person's purchase trend. Alibaba is adding value by creating a more personalized experience to enhance product and content delivery. Alibaba is already transforming the market by its accurate credit model and trust

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14. CS14
Oyo Life – Tapping into New Market Segment
Prachi Vaidya, Amulya, Pritish Kumar Bhoi, Priya Toppo, Rahul Chate, Ritam Roy, S Murali Krishna

One trend that is going on the job market is the widespread migration in search of better job opportunities. Urban millennials are moving to cities like Delhi, Mumbai, Bengaluru, and Hyderabad for jobs which has offered a massive demand for housing in these cities. There were a lot of start-ups which were offering housing rental space to leverage the demand of this sector start-up's like Commonfloor, Housing. com, Magicbricks, Nestaway but they have not managed to cater to the needs of this demographic segment of young professionals and students. These start-up's failed to understand that the millennials want a room with all the amenities and not an entire house.

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15. CS15
Vibrant Subex: Reviving a Culture
Badage Saket Raju, Anshika Vaishnavi, Muskaan Sondhi, Namrata Kundu, Satya Brata Routray, Mukri Saud, Saurabh Sharma

Subex as a corporation has played an instrumental position in developing a piece culture that gives a wealth of opportunities for Subexians to recognize their potential. Subex believes in surroundings that evoke innovation, empowers employees so that they force their energy in the direction of continuous improvement that enables Subexians to seamlessly set up their non- public targets with professional goals. Subexians are the protagonists in this initiative as they are playing a crucial position to propel the development of Subex that strives to undertake out experiences that might be enriching for my part and professionally. Fun is one of the central additives of Vibrant Subex, wherein initiatives together with Family Day, Team Outings, Women's Day, Men's Day, Ethnic Days, Festival Celebrations, Photography Competitions, and extra are enjoyed through Subexians. At Subex, a happy workplace makes a vibrant place of business! An administrative center that motivates each of us to unlock high-quality possibilities.

16. CS16
Technologies in India and Israel for Agriculture Advancements in India

Sayan Das, Abhilasha Choudhary, Aishwarya Bakshi, Alankriti Tiwari, Kartik, Shaikh Sohail Mahamud, Shetty Shashwath Manohar

Agriculture is an essential contributor to the economic development and growth for a developing country like India. Agriculture is the part of the primary sector of the economy and the main source of national income and occupation. Around 60% of the total population is engaged in agriculture and contributes 50% to India's income. Agriculture's contribution to providing the living, labour, and food makes it an integral part of an Indian economy. The growth of other sectors of the economy depends on agriculture to a significant extent. India has almost 43% of land dedicated solely to agriculture. India is the second-largest producer of crops like rice and wheat and the second-largest producer of vegetables and fruits as well. The farmers being a part of rural India suffer from poverty and illiteracy thus leading to less knowledge of the proper services to increase the crop yield. This leads to low productivity even if the land area is considerable enough. The division of land amongst the family members also leads to lower crop production as the farm size gets reduced.

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17. CS17
A Study on The Business of Netflix in India and Its Comparative Analysis

Shikhar Mittal, Ayushi Rastogi, Bhumika Grover, Aparajita Srivastava, Shubham Deepak Mittal, Shubham Deshpande, Bidisha Nandi

The Case is about Netflix, a subscription-based OTT platform which is a part of the Indian video OTT industry that is currently valued at $109 million. The case is primarily aimed at realizing the strategies paved by Netflix to penetrate Indian Subscription based OTT market which is dominated by local companies. Through the case study, we have also tried to understand the Indian OTT market and the challenges faced by the company to fulfil the expectations of the users. The case study is presented by comparing Netflix with two of its competitors: 1 Locally established OTT (Hot star) and 1 Foreign based OTT (Amazon Prime).

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18. CS18
Amazon Alexa and its Challenges to Reach more Households

Ishan Gupta, Bipasha Rajkhowa, Bishakha Choudhury, Avijit Das, Chitra Singh, Sistla Kashyap, Sourajit Roy

Voice assistants became an important feature in the current smart device world. Taking instructions from human and providing services to them has increased the data traffic in the IOT systems due to which telecom players are getting benefitted. However, these devices are connected to the network all the time, without proper security measures will cause security breaches in the voice assistant systems like Alexa, Siri, Google now, Cortana etc., The objective of this case study is to exploit major cybersecurity attacks on the voice assistants and the challenges voice assistant devices are facing currently to enter the market.

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19. CS19
Walmart in Retail Industry

Soureen Das, Sourya Satabdi, Subhadeep Das, Suhas Saini, Harsha Dutta, Deepthi Rao, Deshmukh Sayali Anil

Retail industry is presently undergoing a shift from the traditional brick and motor stores to an era of digitization. With the entry of new players like Amazon into the Retail industry the giants like Walmart and Tesco would have to innovate to survive. The case study aims at providing an insight into the technologies that have been adopted to address the issue of sales, and inventory management. The Case Study explores the various strategies implemented by Walmart and its first of a kind Intelligent Retail Labs, and has a look into the sustainability of the same..

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20. CS20
Telemedicine Framework-Case study

Dibyashree Ghosh, Aashish Bende, Tarandeep Singh Reen, Thapliyal Manas Omprakash, Vemulapalli Hitesh Chowdary, Divya Sree Reddy Chinta, Gargi Shukla

In this case study we discuss the need of telemedicine and the implementation of the same. Telemedicine is the distribution of health care services and information

or data using technology or via telecommunication technologies or electronic information systems. Telemedicine can strengthen the health care delivery system to the remotest areas. It allows patient and clinical contact or care or advisors to contact even when they are separated by long distance. Telemedicine is sometimes also termed as remote clinical services such as diagnosis and monitoring. Serving Patients beyond geographical constraints and reduced time of diagnosis is the main goal of telemedicine. Additionally, extending health care reach by providers to serve patients. Remote, confined, or underserved populations are the beneficiaries that have been included.

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21. CS21
The Emergence of Smart Poles in India

Harini Srinivasan, Vinit Singh, Vishnu K Sudheesh, Vivek Kumar, Badam Dheeraj, Hima L, Ishu Aggarwal

Smart cities have the aim of making public places more connected and smarter. They are inclined towards enhancing connectivity and making life easier. This new transformation demands traffic control management, environmental protection, parking management systems as well as public security and others. All this will require an intelligent infrastructure which connects a broad range of technologies at the same time be cost-effective. Bhopal, the lighthouse city, was selected for redevelopment as a smart city. Focusing on the element of smart poles implemented in Bhopal Smart City, we can conclude how far this technology will bring the city closer and enhance connectivity. Smart poles are the intersection of various technology elements for a societal benefit. Poles. With streetlights being used only for lighting; smart poles are multi- functional. They provide Wi-Fi hotspot services for the entire city, such as electric vehicle charging points, and surveillance cameras can be mounted on them for detecting parking violations. With India ready to embrace 5G technology, smart poles will be the appropriate telecom infrastructure to cater to the needs of the recent technology. With streetlights turning into smart lights, IoT can be leveraged to increase the connectivity of various devices with smart lights. It will function as a centralized command and control center to monitor the entire smart city.

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22. CS22
How Augmented Reality can help to trigger Retail Industry?

Choudhary Jyotirmai Simanchal, Raikwal Sunil Raichand, Anirban Chatterjee, Mohit Kumar Singh, Lavanya Banga, Lende Shweta Hanumanta, Agaskar Ankit Vilas

Retail, the most dynamic and fast paced growing industry at present. Retail sector originated in India long back with the emergence of Kirana and mom & pop stores. Many domestic players such as Raymond, Bombay Dyeing etc. caters to large customer base. Driven by microeconomic factors, currently retail is the fourth largest growing sector in India. Retail sector holds an advantageous position in the Indian market, and this builds a powerful base for consumers, distributors, and manufacturers. Retailers are trying to evolve more and making maximum use of their potential by adopting various technologies like data analytics, CRM solutions and many more, thus forming a backbone of modern retailing. The expected growth of retail sector is from US$ 790 billion in FY 2019 to US$ 1400 billion by FY 2024

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23. CS23
Rise of Floating Cell Towers Technology For 5G

Loveleen, Raghav Mishra, Madhura Hemant Bapat, Aarush Kapila, Vartak Saurabh Ajit, Mani Bhasin, Manjaly Glory Johny

Today as the world is moving from 4G to 5G the need for high-speed data is increasing day by day. For a high- speed data connectivity, we need to have a close web of towers transferring data at an exceedingly high speed which would minimize call drops. Telecom leaders hence are discussing scenarios whether aerial drones and balloons could finally begin providing commercial mobile phone and Internet service from the air. Today there are a billion people in the world who do not have sufficient connectivity, whether that is because of some natural calamity or just because of the place where they live. The implementation of floating cell towers would not only enable internet connectivity to remote areas but would also reduce health related threats because of 5G cell towers. The basic idea of this case study is to explore the possibilities about the implementation of floating cell towers in the future and to try answering the questions whether it would be feasible to deploy these towers by analyzing the pros and cons of floating cell towers and what could be its impact in the future.

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