

Digitalization: A Step towards Sustainable Development

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Abstract: In the era of technical advancement, where everything revolves around the “e” world, digitalization has spread its wings over all the spheres of life. The immense use of digital devices and our growing dependency on them clearly states that digitalization is the need of the hour and has great potential to revolutionize the socio-economic growth parameters thus, forming a symbiotic relationship with all inclusive growth and sustainable development. It has become that important instrument which has simplified the functioning and processes in various areas like administration, regulation, planning and operations of the socio-economic domain by ultimately enriching the quality of life. This very feature of the digital age results in sustainable development as when the societies are digitally empowered, they are more Conscious, Connected, Compliant, Collaborative and Content towards their own growth and in return they work in a tandem as responsible resources for nation’s future prospects. This paper therefore aims at showcasing the scope of Digitalization in the current scenario and its role in helping nations globally attain the ideal aim of Inclusive Growth by following the path of sustainability. Also, it proposes a model of “5Cs of Inclusive Sustainable Growth”, which establishes a relationship between Digitalization and Growth. The Globalization of Digitalization has given a great boom to the corporate, financial and administrative sector which has exponentially widened the horizon of services being offered to the society like better technology to access everything at one click, improved facilities in the healthcare and hospitality department and good opportunities in educational sector for the less privileged. In the growing economies, such approach solely aims at providing a common platform to those millions of people who remain grounded within the walls of poverty, illiteracy and unemployment to reach out for any kind of assistance, register their existence and ask for their rights and development and connect with the nation. This digital platform would integrate the urban and the rural worlds together under a common sheath of Sustainable development keeping in close touch with all social aspect and along with this social upliftment, there would be tremendous economic growth leading to a prosperous nation. With this holistic approach, nations would not only be able to offer inclusive growth but give an efficient sustainable and digital life to their people. As a result of which better living conditions, active public participation, dynamic urban framework, clean governance, and transparency in public welfare policies and procedures would be observed which would result in well aware, self-enabled and digitally equipped people who would be good learners, thinkers, reformers, participators and agents of change and growth marching ahead on the path of sustainable development.

Keywords: Collaboration; Digitalization; Inclusive growth; Socio-economic; Sustainability.

Introduction

“The future belongs to those who prepare for it today”

(Malcolm X’s Speech at the Founding Rally of the Organization of Afro-American Unity, 1964)

Information has always been a vital element in the evolution of mankind. With changing times the mode and dimension changed but the horizon of its scope always increased. It is that driver which spin along with the wheels of time and harness growth and development. It is because of this, we have evolved from a nomadic cave man to a civilized social being living in a culturally rich, economically sound and socially buoyant environment. It was then in 1970s when the acknowledgement of Information Age was formalized. The world moved towards the shaping of Information Society which was structured around networks instead of individual performers, and works through a constant flow of information through technology. Castells, in his book *“The Rise of the Network Society”* emphasizes the interrelationship of social, economic and political features of society, and argues that the ‘network’ is the defining feature that marks our current epoch. ^{[1] [2]}

Objective Of Study

To showcase the scope of Digitalization in the current scenario and its role in helping nations globally attain the ideal aim of Inclusive Growth by following the path of sustainability with reference of HCL's case study.

Our Transformation Journey: Connected → Informed → Empowered

With time our information absorption rate also increased. It is because of this so many technological developments took place to provide a better flow of information. Many devices and platforms evolved to unite us through a common channel of digitalization to make us well informed as with this enlightenment comes empowerment which helps in growth and development. This is how the transformational journey is traced through the various stages.

Internet Age

It was in 1980's a new boom was created with the start of www. In Twenty-one years since the society first took notice, the World Wide Web became the heart of the global economy, routing interactions for nearly 40% of the world's population. The digital devices count reached upto 100 million users. Within 12 years the Internet gathered its first billion users. This marked the beginning of a great digital revolution as the emerging world was advancing towards mobile phones, opening more avenues to Internet adoption. With this the billion Internet users, logging on in an era of universal mobile connectivity, offered a promising future of greater socio-economic growth and increased commercial opportunities.^[3]

Rise of Digital Age

By the 1990s, all the technologies which deal with information storage and transmission were going to the new, more refine and smoother platform of Digitalization. This is one characteristic of computer technology that sets it apart from earlier analog technologies is that it is digital. Analog technologies incorporate a combination of light and sound waves to get messages across, while digital technology, with its system of discontinuous data or events, creates a universal model to represent information that is expressed by almost anything using light and sound waves. The digital age has given a common language and platform to all the people of the world, thus uniting them to share their views and experiences freely. With this common pool of ideas, a lot of information is generated which is highly rich in content and can be used universally with easy access. Such information in turn acts as food for thought and again helps in generating or framing more opinions which further adds on to the pool of information making it more rich. This results in progress. The penetration of digital technology in the past two decades has been tremendous. The human race also has very evidently picked it up. "The number of personal computers (PCs) in use worldwide surged from 100 million in 1990 to 1.4 billion by 2010. There were 10 million mobile phone users in the world in 1990; today there are more than 5 billion. The number of Internet users grew at an even more rapid rate over the same decades, from 3 million to 2 billion." This states that the world today is progeny of the digital age.^{[2][4]}

Current Digitalization Age

The surge in Information and Communications Technology use then kept on increasing with various advancements in digital technologies. It was then people became familiar with Digitization, which is defined as the social transformation triggered by the massive adoption of digital technologies to generate, process, share and transact information. Digitalization is the use of digital technologies and mediums to access, share and harness information in a very cost effective, speedy and user friendly manner.

Through digitalization, Cell phones become 'smart phones' with more than 5 billion users and the internet usage reached upto 3 billion users. This period revolutionized the flow of information and finally made us step into the age of Digitalization, where we use a number of such platforms to access, share, create and communicate information.^[4]

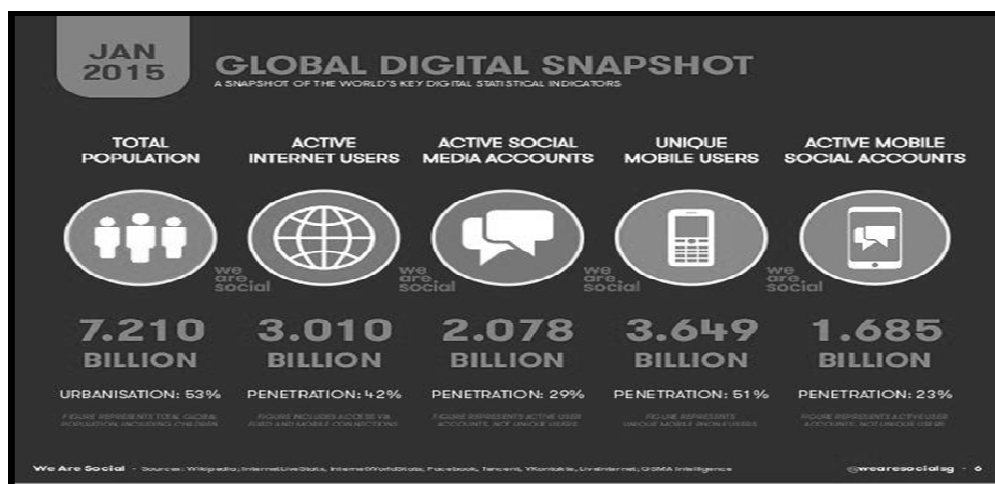
This marks our journey from being connected to being well informed to being socially empowered as a result of which today we are self-dependent and future ready marching on the path of sustainable development.

Our Global Digital Footprints

Digitalization has expanded its reach globally and this is highly evident from the snapshot (Image1.) shared below. 2014 witnessed some ground breaking digitalization initiatives across domains. It gave a good rise to the number of the users of this technology. As we stepped into the year 2015, we were all hit by a strong streak of Global Transformation. This transformation has made the world highly digital in all their actions and bridged the gap between the unaware and informed classes as the flow of information is now universal. Everyone is globally connected at each moment with the handheld devices they use due to the power of digitalization. More socialization

has narrowed down the social gaps resulting social development. As per some of the statistics, 42% of the world's population is connected to the internet from Jan'2015. This has seen a rise of 7% from last year and is expected to grow even further. Very soon we will touch the 50% slab, with mobile services being highly popular among the people. All aspects like social, economic, administrative are now-a-days addressed by this only and are creating a good growth opportunity in the developing economies. The facts state that the mobiles have covered upto 51% usage span in the market and about 72% of the population of some of the developing nations like India is reaching out to the web services using the medium of mobiles. This growing trend has made the market quite vulnerable and digitally dynamic. A year on year growth of 12% with 222 bn users evidently showcases our rising footprints on the social media front and digital transformation. Below is a snapshot of the year and year growth rate of the various parameters taken into consideration over the past 12 months. ^{[5][6]}

Image 1. Showing Global Digital Penetration ^[6]



Digitalization And Sustainable Development

Digitization is a new game changer and has changed the ways of thinking and shaping up things. It has given a new dimension to the businesses to grow. Digitalization speaks about information flow of objects, visuals, sounds, through a fast, spontaneous channel of signals. The result is called **digital representation** or, more specifically, a **digital image**, for the object, and digital form, for the signal. The result is called digital representation or, more specifically, a digital image, for the object, and digital form, for the signal. The result of this first definition of digitization is the representation of something found in the physical world in the form of another media. Nicholas Negroponte (founder and Chairman Emeritus of Massachusetts Institute of Technology's Media Lab), took much the same approach when he defined the essence of "Being Digital" as replacing the importance of atoms with bits.

The first definition of digitization drove the creation of today's e-Commerce world. We have all invested millions in creating digital copies of analog capabilities. We now have the physical store and an e-Store, physical payments and e-Payments, reality and e or virtual reality. The duality implied in the first definition of digitization has driven the creation of new types of socio-economic growth opportunities, new levels of efficiency, greater transparency and choice than anyone could have imagined. Consider the possibilities of a different definition of digitization as: *The degree to which a society's goals of growth development and value creation are realized through technology.* A definition based on value and revenue broadens the idea of digitization as it moves beyond managing information about things to creating new value based the properties of digital information itself.

Rather than thinking about transactions and systems, think of the array of technologies that can be involved in the creation of value: mobile phones, telemetry, social preferences, big data, meta data, analytics, behavior, expression, cloud infrastructure, etc. Each represents a part of an emerging digitized economy and sources of future value.

Now think of the business models that enables when you go beyond replicating current value propositions via digital channels. This type of description of digitalization is behind the core strategies at Google and Facebook which care more about the information of information, its meanings, connections and extension of the human experience, than the simple automation and distribution of information or information based products.

In the digitally sound scenario, in trends like mobile internet, IoT and big data have paved a way of greater opportunities in all domains. The Businesses are taking over from here using such techniques for the optimization of their resources and cost and developing more on the enterprise technologies and processes. On the social front, it has helped bringing people together and stationed them on a common platform of digitalization. Due to cost efficiency and numerous growth opportunities this leads to economic stability as well. Hence, this approach aims at overall growth and takes us closer to sustainable development. ^{[6][7]}

The next wave of Digitization reflects new ways of thinking where we look to create value by:

- **Using information in its extensive sense to give people better/greater choice and independence to transform their experience.**
- **Developing new strategies based on the knowledge of people know and their ability to know more and then applying it the best way to address their needs, wants and aspirations.**
- **Improving operations and performance through good coordination, better resource deployment , and improved, faster and deeper decisions**
- **Generating growth models by leveraging all capabilities through innovative ways.**

We have lived with “Being Digital” now for almost twenty years and while there is still a long way to go in being digital, there is also a new set of opportunities beyond just digital representation that we are just starting to see.^{[7][8][9]}

HCL’s Case Study

We have tried to explain this concept by taking HCL’s case study as this company is successfully leveraging the platform of Digitalization to cater to the sustainable growth. One of the objectives of this paper was to study the scope of the digital technology in transforming our Socio-Economic landscape and this we have highlighted and suggested through the practices and models used by HCL. As a part of our recommendations we strongly affirm that such approach should be adopted globally for targeting all inclusive growth.

Company’s Introduction

HCL Technologies Limited is a global IT services company, with its headquarters in Noida, Uttar Pradesh, India. HCL Technologies (known as Hindustan Computers Limited) offers a wide range of diversified services. Some of them are:

- IT consulting,
- Enterprise transformation,
- Remote infrastructure management,
- Engineering and R&D,
- Business process outsourcing (BPO).^{[10][11]}

This IT giant has a global presence in 31 countries, and functions across a number of industry verticals including aerospace and defense, automotive, consumer electronics, energy and utilities, financial services, government, independent software vendors, industrial manufacturing, life sciences and healthcare, media and entertainment, mining and natural resources, oil and gas, public services, retail and consumer, semiconductor, server and storage, telecom, and travel, transportation, logistics and hospitality.

HCL also registered its presence on the Forbes Global 2000 list and became one of Asia’s Fab 50 Companies. With a market capitalization of \$22.1 billion as on May, 2015, it is amongst the top 20 largest publically traded companies. With the revenue worth of 6.0 billion as of August 2015, HCL Technologies is a blooming IT company in India. ^[10]

At HCL, there is a culture of maintaining relationship with the stakeholders. We believe in extending our ‘relationship beyond contract’ by giving the best of our services to the customers. This is addressed through a system of a very strong value model. The three core principles of the same are shared below:

- “We put Employees First, empowering them to believe in everyday ideas that create immense value for our customers, making HCL Technologies the world's largest *Ideapreneurship*.
- Our fixation on **Value Centricity is dedicated to delivering more value for our clients**, putting their interests ahead of ours and delivering value that goes beyond the contract.
- Our belief in **Trust, Transparency and Flexibility** drives us to step into our customers' business reality, guaranteeing outcomes with great enthusiasm.”^{[11][12][13]}

Though we have an eye for detailing and look for viable business contracts but at the same time we given equal importance to the relationships which we establish with them. This is what differentiates us from others and helps in attaining inclusivity in our dealings which is very positive and progressive.

HCL gives wings to the entrepreneurial spirits of its employees as it empowers them with the power to ideate. They call them Ideapreneur, who are the change masters and growth drivers. This philosophy results in contentment amongst the employees and innovative product delivery, which pleases the stakeholders. Thus, this win-win situation paves the way for long term growth.^[10]

Digital Transformation Partner Of The 21st Century Enterprise

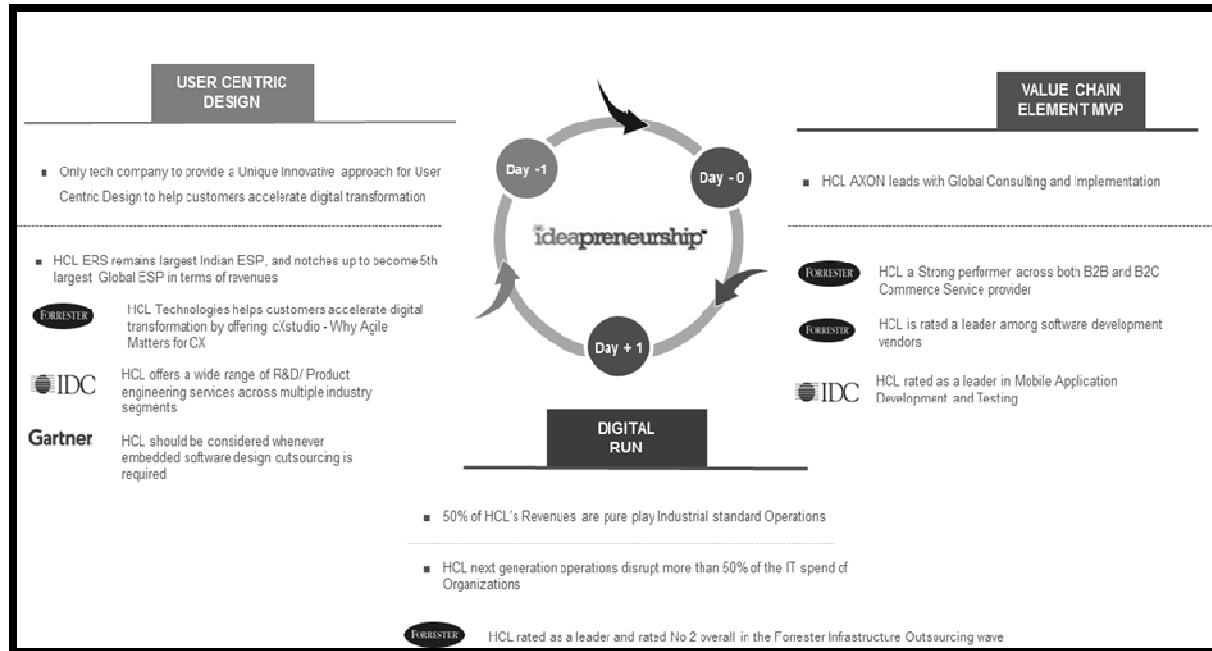
The Enterprise services division at HCL has the single largest engineering services business among the pool of other Indian outsourcers; and in Designing Capability, is one of the top five global survivors. Besides this, company's innovation lab concept drives is a good combination of technical skills and human ability. This gives space to innovation as a result of which user centric designs are created which is these days an important ask for a 'Run' requirement.

Through digitalization, the company has expanded its scope from design > implement> to run phase. With good Infra services, company has strengthened its operations as well.

“HCL's Digitalization solutions and services are the answer to every modern corporation's dilemma to effectively transform itself from a legacy driven traditional organization to a digitalized corporation. The solutions and services empower traditional organizations contest against "born digital" competitors by analyzing and involving the organization's bequest systems, measuring its readiness for the digital age, and addresses the complexities through solutions that create a complete digital enterprise. It's not just about the speed and developing or processing things quicker, but also at structural level; changing the way employees and customers interact and maintain relationship with the organization. Generally the smaller (or the younger) a firm it is more likely to be further ahead in the area of digitalization. The model below shows how digital technology and employee innovation are clubbed together to give an enriching experience to the global clients and this way it aims at following sustainable approach as our digital offerings leverage the features of digitalization which in return give enriching employee and client experience which is again environment friendly and helps in saving cost which is then again used for generation of resources and technology.”^[13]

AT HCL, Digitalization is a business led technology value chain that transforms user experience effectiveness in agility, growth, and profitability which is illustrated through our Digital enterprise model Image

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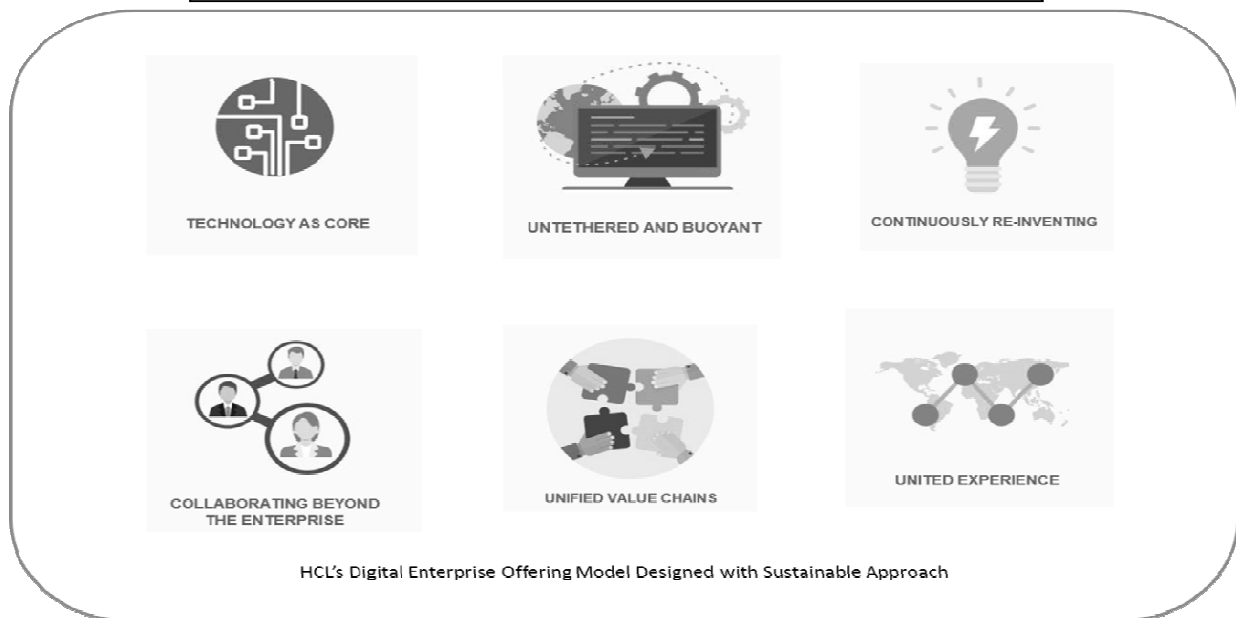
Image 2. Showing Digital Enterprise Model ^[13]

We offer these services into four varied categories:

- **Experience Platform**
- **United Experience**
 - Design as a Service
 - Co- Innovation Lab
- **Managed Services**
- **Service Exchange**

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Image 3. Showing Service Offering Model

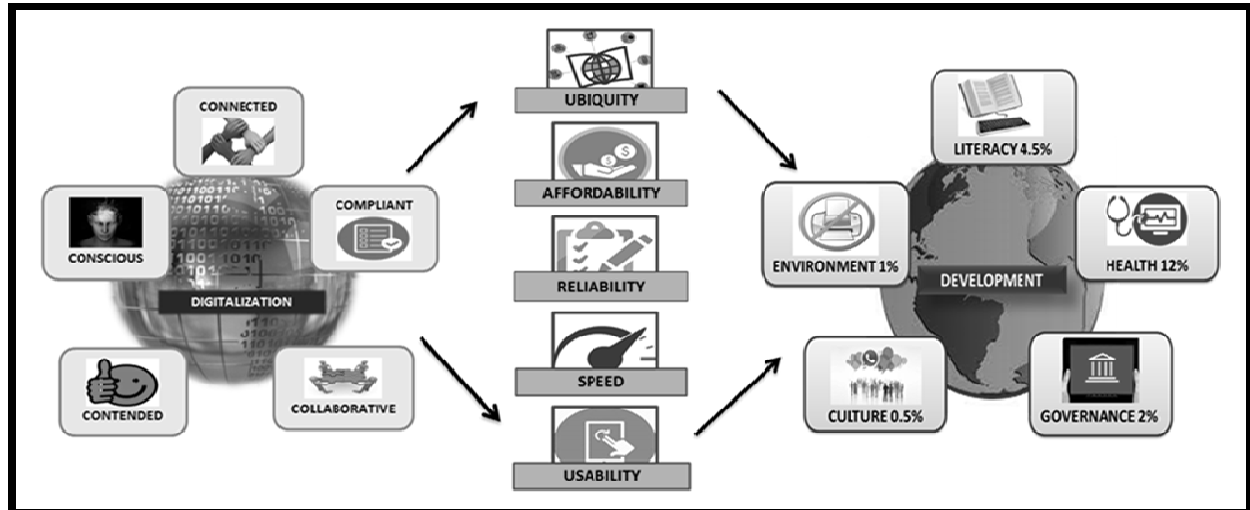


Influencing Socio-Economic Landscape Through Growth Model

To study this in detail we have proposed a model of 5Cs of growth Image4. which highlights the five foundation pillars of Digitalization which help in creating Socio-Economic impact on the society leading to sustainable development. This is possible through its five unique features which greatly help in leveraging this platform to cater to the inclusive growth. At HCL, we measure this in few areas where digitalization has helped in addressing areas of Corporate Social responsibility by benefitting environment and society and by saving cost. In return the saved cost is again used for generating resources, developing technologies, delivering better services which is empowering people and then empowered people them work in a tandem for the growth and development. It showcases how HCL adopted a simple, balanced and holistic approach to social empowerment backed by Digital Technology that has enabled it to address the larger canvass of improving people's participation, engagement and growth in the communities.

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Image 4. Proposed Sustainable Growth Model



Five Foundation Pillars of Digitalization

These are the basic foundation pillars (5Cs of growth as illustrated in Image 4) which make digitalization a very strong platform which can generate growth.

- **Conscious:** With the advent of Digitalization, accessibility to information and data has enormously increased. This has made people more aware and alert. A streak of consciousness has touched our souls and we have started responding, questioning and re-evaluating the activities that take place around us. It is because of this we have become more open to ideas, thoughts and opinions. Our sense of judgment has awakened and our actions are also channelized and planned, directed towards our self-development.
- **Connected:** It has bridged the gap between geographies and has globally brought people together. The urban and the rural divide exists no more as everyone is now at a same platform with parity at par because of this single medium.
- **Compliant:** It has helped in making all our processes and practices more compliant as web technologies offer easy tracking and monitoring. It has set certain norms which can be easily followed by all, thus resulting in 90% compliance.
- **Collaborative:** It has unified systems and functions which has helped people worked collaboratively like a unified entity the ultimate aim is also same ie. attainment of sustainable development.
- **Contented:** All this has resulted in a very enriching experience for all as there is equality, space, better facilities, unity and connect among people which certainly help them grow as individuals for a better sustainable future. It gives a sense of contentment as there is inclusivity in this approach.

Five Unique Features of Digitalization

After the foundation pillars comes five diverse features (Table 1) which help in casting its impact on the society. These act as catalyst to accelerate the functionality of digitalization.^{[11][5]}

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Table 1. Features of Digitalization

Parameter	Metric
Ubiquity It refers to universality in terms of accessibility of the digital services and applications across globe by all the users.	<ul style="list-style-type: none"> • Internet usage • Mobile phone usage • Mobile broadband Usage • PC, tablets Usage • 3G mobile connection Usage
Affordability The availability of wide range of services at minimal costs make it an affordable means for all.	<ul style="list-style-type: none"> • Fixed installation cost • Fixed device cost • New surfing charges • General Mobile tariff charges
Reliability Highly reliable due to the documentation and transparency maintained at a single platform	<ul style="list-style-type: none"> • Presence on Authenticated sources •
Speed The accessibility within minutest timeframe	<ul style="list-style-type: none"> • Speed of data transmission over internet • The speed measure of mbps/Kbps
Usability Simple usage for all groups of society and high adoption rate amongst people.	<ul style="list-style-type: none"> • The % of people using this platform • Digital Evolution Index • Footfall on the Social Networking sites per month • Average SMS usage per customer

Creating Socio-Economic Impact Through Digitalization

Digitalization has a very wide impact on many spheres of our social environment. We are however, going to throw light on those five major areas which HCL is addressing to. Literacy out of these is the one topic which we have covered in detail in this study. Illustrated in Image 4.

Literacy

Bridging gender, socio-economic gaps in communities through digital literacy for women & girls is main objective of HCL. HCL believes that companies should identify and choose causes closely aligned to their business and philosophical DNA to ensure that there is a whole-hearted adoption and implementation of the program across stakeholders. The organization identified digital literacy for women as one of the thrust areas for empowering women in the communities, under its corporate social responsibility framework. Digital Literacy is the key feature in all our initiatives for girls and women, be it education, employability through skills training or other empowerment programs. HCL lays special emphasis on empowering women digitally through computer education support, internet connectivity through IT labs and regular sessions in important digital skills like using the internet for information sourcing and expansion of knowledge. The belief is that efforts to instill an interest for computers and internet in the minds of young girls and women, will not only enhances employability quotient but will also improve their quality of living as a whole. This is carried out through HCL Foundation, the CSR division of HCL Technologies that enables employees to engage sustainable community service activities.^[14]

About iBelieve

The women in HCL have contributed so much to the growth of the company and the industry as a whole. They have successfully donned different roles and critical leadership positions in the company and have delivered impactful results in their respective domains. They are role models for many young women. Leveraging on this fundamental factor, HCL launched iBelieve, a unique initiative that works with one simple underlying theme – empowered women will empower other women! I Believe is a program sponsored by HCL to encourage, enthuse and enable women HCLites to help women in the larger eco system to advance in their personal and professional journey. Founded on our core philosophy of “Relationship Beyond the Contract”, and our commitment to the UN Women’s Empowerment Principles, I Believe program is led by Women of HCL. The program has four major objectives:

1. Empowering less privileged women by improving their access to knowledge and information through digital literacy, thereby enabling their fundamental need to becoming better informed citizens.
2. Equipping girl students with life skills, digital literacy and career guidance, and enthusing them to pursue higher studies.
3. Reskilling women for resuming IT careers. The focus is to get women back to work who left their careers for child / dependent care.
4. Motivating women by connecting them with women leaders, and enabling them to understand how to manage their priorities, develop necessary leadership and networking capabilities to stay successful in their careers.

A strong feature of this initiative is that it is very well supported by the current working female workforce of HCL as they have voluntarily taken up the task of empowering the less fortunate in the society by contributing in best possible way. They actively participate in all the programs organized for the deprived women. With iBelieve, HCL aims to furnish women with information, skills and resources to take a step forward in the personal and professional front. They help in building some career aspirations within them by equipping them with right opportunities and knowledge to become independent in life. At an online portal (www.teachwomen.in) iBelieve brings together all the resource groups and networks to related to the cause for easy accessibility.^[14]

Innovation by HCL technologies

In line with HCL’s commitment to the UN Women’s Empowerment Principles (WEPs), the iBelieve network enables change through four key programs: iEmpower, iTech, iSkill and iMotivate. The first two programs are committed towards enthusing, energizing and enabling 100,000 girls and women by 2020 through preparing them with the right skills, information, and resources to grow at personal and professional fronts.

1. I Empower – Digital literacy for women. iEmpower is one of the four key programs under iBelieve aimed at enabling women, especially of less privileged background to become better informed citizens through digital literacy. The program aims to reach out to 50,000 women and empower them through digital literacy by 2020. HCL is setting up digital literacy training centers through our partner NGOs in urban slums in which HCL Foundation is functional. HCL women employees volunteer for iEmpower program during weekends. They will assist the enrolled women from communities on how to use the internet for their own development and provide information on important sites that will help women understand their rights, access to legal support etc.

2. I Teach – Aspiring girl students to pursue careers. iTech involves equipping girl students with life skills, digital literacy and career guidance and enabling them to pursue higher studies. The mission of this program is to reach out to 50,000 girl children and equip them with adequate skills for pursuing careers by 2020. The program will cater to the Age group of 12 to 20 yrs. In addition to digital literacy, this program will also empower girl students from all HCL community youth centers and skill development centers by providing Life skills training, after-school coaching, advocacy programs, and other technical and non-technical programs. Both men and women employees volunteer for iTech program during weekends and they are also encouraged to take this program to various schools they are associated with. Thus, through these two programs, HCL is working to break the barriers through digital literacy to inform, educate and enlighten users women from less privileged sect. Around 20,000 women and 30,000 girls through iEmpower and iTech respectively, in NCR, Chennai, Bangalore and Hyderabad will benefit from this initiative by the year 2016. The programs will also expand to tier 2 and 3 towns including rural villages identified by the Foundation in India in 2017.

“A Mile For Her” Campaign

After the successful launch of iBelieve, the next challenge was to create awareness on digital literacy for women and to garner support for the cause both within and outside the company by designing a global campaign which was scalable and self-sustainable. And thus HCL launched “A Mile for Her”, its first campaign under iBelieve in March 2015. The objective was to spread the word on women empowerment through digital literacy and to celebrate and value the contribution of women as professionals in the organization and personally in our lives. Through this campaign, we created an opportunity for people to run a mile and dedicate it to the inspirational women in their life. To participate, all one needed to do was run or walk a mile anywhere, then raise his/her hand and shoot a video or photograph, and Upload/ tweet/ post it with #aMileForHer on his/her social media profile (Facebook, Twitter, Instagram, Vine or LinkedIn). Participants could also nominate two or more people to take up the challenge by tagging them. For every mile run, HCL pledged to empower women through its digital literacy initiatives. The key objectives of this campaign were:

- To empower less privileged women by improving their access to knowledge and information through digital literacy, thereby enabling their fundamental need to becoming better informed citizens
 - The campaigns aims to touch the lives of over 100,000 less privileged women in the next five years through Literacy – both digital literacy as well as adult education
 - To create global awareness specially among youth about the current situation of women literacy
- #aMileForHer campaign is well aligned with the UN WEP commitment, as well as the Samuday goals of HCL.

A Mile for Her Campaign Outcome:

The Campaign was launched successfully by Mr. Prithvi Shergill, CHRO, HCL, in March and received earnest participation from HCL employees in India and other geographical locations where we operate. In India, the campaign was active in cities such as Noida, Chennai, Bangalore, Hyderabad, Kolkata, and Delhi. HCLites from the USA, Europe, Finland, Poland, also participated in the campaign in significant numbers. During the campaign iBelieve enrolment forms were also filled in by employees and registration. The simplicity and relevance of the campaign struck a chord with people from all sections of society. The campaign saw enthusiastic participation from men, women, elderly citizens, children and youths. The campaign has received more than 100 Million impression on social media. Global influencers like Kim Stevenson (CIO – Intel), Debjani Ghosh, Mary Kom, Gul Panag (Youth Icon) were associated with the campaign. The campaign was trending on Twitter all across India on April 10 and 19 and HCL became Number One brand on Facebook among global IT service providers. The campaign received traffic from more than 60 countries & engagement from more than 23 countries. Over 45, 000 people have shown their support by running between April-May 2015. They have taken the first step in empowering women through Digital Literacy programs of HCL as envisioned by HCL Foundation and iBelieve. The following cases elucidate the process of empowerment through our digital literacy community projects.

In the current scenario the government spends ~4.5% of the GDP on Literacy, by using the digital platform this cost can highly be saved. ^{[12][13][14]}

Governance

Due to digital transformation in the area of governance, all the processes and procedures have become more efficient and transparent as now there is no manual intervention. Unnecessary delays, bribery, dominance of the bureaucrat and corruption has minimized. E-governance has offered a very democratic and open system to the people. Also, it is easily assessable for the rural population, thus connecting them with the developing world. For example: At HCL, all the policies, rules and regulations are made available on e-portals. Employees have to abide by them as everything is tracked digitally. The attendance is tracked online, all employee information, compensation schemes, taxation norms, labour laws and regulations all the digitally monitored. This has greatly helped in making the whole process very robust and transparent. Looking at its global scope we can say that the GDP spent on this area is around 2% which can easily be saved by channeling 1-governance. Facilities like e-voting system, e-passport, e-tax filing etc. are very cost effective and saves a lot of time and energy, hence, it shows that this area has a great scope of leveraging the digital platforms. ^[15]

Health

There is a great scope of digitalization in the healthcare industry as this is one sector which keeps on growing and serves the masses. At HCL, we have devised many applications which are user friendly and help in updating, tracking and arranging for health related employee requirements. One of the applications is Mobius, which works in collaboration with some of the health institutes. It is used for the internal HCL employees and provides a bridge

between employee's need and the health facilities available. All this maintained digitally and is serving fairly well to `1.15 million population. This is again a very cost effective approach and has the potential to save upto 12% of the GDP spent. In the global scenario, the information technology wave has hit the art and science of healing by digitization of medical files, now known as electronic health records, by providing e-health checkups where online recommendations and discussions are organized with doctors, facilitating with sugar, blood, stress etc. checkup online through some digital devices only.^[16]

Culture

Culture is one such aspect which is very well addressed by the Digital Age. We are all a big population, geographically spread across the distances. It is through the bridge of digitalization that we have all become connected. This connect helps in the cultural interchange and exchange, which had made us culturally rich and socially viable. As HCL has a global presence in 31 countries, it is through the power of internet and some of the digitalized functions like web conferencing, e-mails-video calling etc., the geographies have come closer and there is an establishment of cross-cultural connect. Use of new digital media and technology tools has therefore enhanced cross cultural exchanges, knowledge sharing and helped in developing better relations. The Information Communication Technology tools have great scope to provide cultural preservation, integration and diversity and better processes.^[17]

Environment

There is no denying the fact that most of digital devices or platforms are environment friendly and have helped in reducing the carbon footprints. HCL also fully supports this by going digital in most of its operations like all the paper publishing has turned into e-publications. The reports and data is all available on ipads, desktops and even mobile phones. We have this way saved the paper use and the cost. Similarly carrying out operations online rather than using physical resources has helped in adding a bit in favor of environment protection. It is assumed that `1% can be saved by going digital in some ways for a healthy environment.^[18]

Conclusion

Through all this it is this very evident that Digitalization is the new game changer and has great potential to promote inclusive growth by creating a healthy socio-economic environment. It has helped in connecting, communicating and empowering people by bringing them on a social platform. With all this it has transformed our growth landscape through its diverse features and pillars. The proposed models suggest how HCL is leveraging this platform for cost reduction and sustainable development. It is estimated that by going digital we can save US \$`8 trillion in next five years and can use the same towards socio-economic development. Digitalization therefore is a very good step towards creating a real virtuality for the attainment of all inclusive, sustainable growth.

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REFERENCES

- [1] Castells, M., 2010. *The Information Age: Economy, Society and Culture Volume 1: The Rise of the Network Society*. 2nd ed. Oxford: Wiley Blackwell. p.162
- [2] Castells, Manuel (1996, second edition, 2009). *The Rise of the Network Society, The Information Age: Economy, Society and Culture* Vol. I. Malden, MA; Oxford, UK: Blackwell. ISBN 978-0-631-22140-1.
- [3] *Digital Evolution Index*. (8 August 2015). Retrieved from website: <http://fletcher.tufts.edu/ebiz/index>
- [4] *Digital Revolution*, (8 August 2015). Retrieved from <http://web.archive.org/web/20081007132355/http://history.sandiego.edu/gen/recording/digital.html>
- [5] Karim Sabbagh, Roman Friedrich, Bahjatel, Darwiche, Milind Singh, Sandeep Ganediwalla, *Maximizing the Impact of Digitization*, (10 August 2015). The Global Information Technology Report 2012, World Economic forum.

- [6] *2015: A Year of Digital Darwinism?*, (10 August 2015). Retrieved from website: <http://www.iamwire.com/2015/02/2015-year-digital-darwinism/109585>
- [7] *Why Digital is the key to Sustainable Development*, (15 August 2015). Retrieved from website: (<https://agenda.weforum.org/2015/03/why-digital-is-key-to-sustainable-growth/>)
- [8] *Gartner blog*, (15 August 2015) Retrieved from website: http://blogs.gartner.com/mark_mcdonald/2011/10/20/a-different-definition-of-digitization-is-based-on-value-and-revenue-not-atoms-and-bits/
- [9] *The Evolution of Digital Media*. (17 August 2015). Retrieved from website: <http://istrategyconference.com/blog/the-evolution-of-digital-media>
- [10] *HCL Technologies*, (17 August 2015) Retrieved from website, <http://www.hcltech.com/>
- [11] *About us*, (17 August 2015) Retrieved from website: <http://www.hcltech.com/about-us/about-hcl-technologies>
- [12] *Socially Responsible Business*(18 August 2015) Retrieved from website: <http://www.hcltech.com/socially-responsible-business>
- [13] *Digital Transformation partner of 21st century Enterprise*, (18 August 2015) Retrieved from Company website: <http://www.hcltech.com/digitalization/>
- [14] *HCL bridging the gender gap through Digital Literacy*, HCL's case study, United Nations Global Compact, (18 August 2015) Retrieved from website: <https://www.unglobalcompact.org/take-action/action/case-example/121>
- [15] *Digital Governance and Impact on Citizen Services*,(20 August 2015) Retrieved from website: <http://www.moneycontrol.com/digitizingindia/news/digital-governance-and-impact-on-citizen-services-1399696.html>
- [16] *Healthcare's Digital Future*, (20 August 2015) Retrieved from website: http://www.mckinsey.com/insights/health_systems_and_services/healthcares_digital_futur
- [17] *Digital Cultures - Digital Diversity*, (20 August 2015) Retrieved from website: http://culturalpolitics.net/digital_culture
- [18] *Exploring the environmental impact of digital transformation*, (20 August 2015) Retrieved from website : <https://sympact.cs.bris.ac.uk/>

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