SKILLS 2017

CONFERENCE REPORT

LEVERAGING DIGITAL INDIA
FOR RURAL EMPOWERMENT

DR. MCR HRD INSTITUTE OF TELANGANA,
HYDERABAD, INDIA - NOVEMBER 16-17, 2017

"Digital India is an enterprise for
India's transformation on a scale
that is, perhaps, unmatched in human
history."

- PM Shri Narendra Modi, Digital India Dinner,
San Jose, California, September 2015

Organized by:

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TELANGANA ACADEMY FOR SKILL AND KNOWLEDGE
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"Besides the attractive labour force and governance in India, India's structural reforms that are gradually changing will make India a more competitive player in the global economy and better equip it for future growth. Each of these represents an important step forward for India and sends a signal to the world's investors. A signal that India is focused on long-term growth, stability and on becoming an easier place to invest and do business."

– Anita Marangoly George
Managing Director, South Asia
Caisse de dépôt et placement du Québec.

"The last mile of the digital highway is not infrastructure but the skills of the users."

– Debjani Ghosh
Intel, South Asia

"Digital India, by far, is the most potent opportunity for the transformation of India by empowering nearly one billion rural Indians with the advanced skills and the latest digital tools, enabling them to "leapfrog" into the Digital Age."

– Y.S. Chowdary
Minister of State for Science &
Technology & Earth Sciences, Government of India.

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ACKNOWLEDGEMENTS

SKILLS 2017 is the fourth in a series of conference focused on developing the skills of rural Indians. Earlier conferences addressed vital aspect of this important task: Challenges for Institutional Development (2010); Challenges for International Cooperation (2013); and Realizing and Sustaining Clean India (2015).

SKILLS 2017 presented a valuable platform for idea development and collaborative discussion, among the relevant stakeholders in India and across the world on the national Digital India mission's potential to transform rural agricultural economies. With over 350 participants from five countries, SKILLS 2017 International Conference has achieved a key meeting with inspiring exchange on the best means to identify the challenges and create the digital solutions necessary for rural empowerment.

SKILLS 2017 is our modest effort to realize digitally empowered India. We are thankful to all those who supported us in our endeavor to make a change.

We greatly appreciate the valuable advice and support extended by Mr B.P. Acharya, IAS, Special Chief Secretary to Government of Telangana and Director General of Dr. MCR HRD Institute of Telangana; Mr. Jayesh Ranjan, IAS, Principal Secretary of the Industries & Commerce and Information Technology Departments, Government of Telangana; Mr. Sujiv Nair, Chief Executive Officer, Telangana Academy for Skill and Knowledge; and Mr. Gary Khan, Chief Executive Officer, Hyderabad Visitors Convention Bureau in building the conference and its successful delivery.

We are grateful to all participants – delegates, speakers, session chairs, sponsors and other collaborating partners. We profoundly thank the conference committees, TEAM REEDS & LSLSI, and everyone who contributed in various ways to make SKILLS 2017 lively and effective.

We welcome your continued engagement with REEDS and LSLSI in "Making of Developed India"! Thank you again for being part of such a wonderful conference experience!

– **SKILLS2017 CONFERENCE ORGANIZING COMMITTEE**

"Digitizing a country the size of India, and making it work well, truly will have a beneficial effect."

- Sundar Pichai
CEO, Google.

INTRODUCTION

Digital India is a bold initiative to transform the country using digital technologies. Proclaimed by Prime Minister Narendra Modi on July 1, 2015, Digital India encompasses three core components and 9 "pillars".[1]

VISION OF DIGITAL INDIA

- ⦿ The vision of Digital India programme is to transform India into a digitally empowered society and knowledge economy.
- ⦿ The Digital India programme is centered on three key vision areas.

PILLARS OF DIGITAL INDIA

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[1] Source: www.digitalindia.gov.in

A number of countries, cities and regions have proposed digital transformation initiatives but Digital India is expected to be the largest and most comprehensive.

Rural Economic and Educational Development Society (REEDS) and Life Skills and Livelihood Skills International (LSLSI), (both of Hyderabad), undertook the SKILLS 2017 Conference to place special focus on using Digital India to ensure the benefits of digital technologies. The conference included plans, programs and policies for sustainable development in rural India. Some 40 speakers from India and five other countries, including government, academic, business and NGO leaders, provided rich insights and powerful proposals in five areas: infrastructure; education; healthcare, financial inclusion and agriculture.

Among the important calls for action, speakers noted that:

- Global forces will invariably shape the future and direction of Digital India.

- India needs to move quickly as other nations and states have undertaken their own digital initiatives that portend direct competition with the Indian economy.

- Digital technologies are transforming the role of the individual in the state and putting creative and powerful tools in the hands of its citizens. India must, therefore, channel digital technologies toward productive, coordinated action to improve the livelihoods of all its citizens.

- India's demographic dividend, particularly with the youngest population in the world, has the potential to become the one of the world's political, economic, social and cultural leaders.

"The 19th Century was the British Century. The 20th was the American Century. The 21st Century belongs to India."

– Dr. Richard Oliver,
Chair SKILLS 2017.

"India is on a path for global leadership but empowering rural India is a Strategic Imperative for the achieving of that position."

– Dr. Richard Oliver,
Chair SKILLS 2017.

THE DIGITAL RAJ …

THIS IS INDIA'S MOMENT!

In the sixth century, the region now known as India was, the world's wealthiest and most advanced society. The region grew and diversified with successive waves of people arriving from both the east and west.

Over the intervening years, however, India did not keep pace with the growth of other regions and, in fact, opted for a largely rural economy. Acceptance of industrial technologies was widely discouraged, and the slogan "Automation is Anti-Nation" defined the political and economic moment. With independence in 1947, the British Raj was replaced by the License Raj (an intense and entrepreneurially discouraging regulatory regime), which had the effect of dramatically hindering economic development and slowing global competitiveness.

Fifteen centuries later, India is poised to re-capture that leadership with what might be termed the Digital Raj!

Today, India is world's seventh largest economy, and boasts the third largest military, and is expected to account for eight percent of global GDP by 2020. In 2014, India had the world's largest population (with a lower median age than Japan, China or the European Union), and is on track to have a 600 million middle class by 2025. Recently, many world leaders have recognized the growing importance of India by not referring to the region as Asia-Pacific, but by the term Indo-Pacific. However, as Alyssa Ayers points out in her forthcoming book Our Time Has Come: How India is Making Its Place in the World, India is without a seat at the center of global power and has no membership on important counsels such as G-7, the United Nations Security Council and other important world organizations.

To expect that the Digital Raj will be achieved without disruption is naive. Digital technologies have dramatic transformational impacts which can occur quickly and decisively, leaving in their wake economic and social dislocations of significant magnitude. The U.S. economy, for example, is being significantly restructured with the digital giants (Google, Facebook, Apple, Netflix, Microsoft, etc.) putting people and organizations out of business and re-writing the American Dream centered in new digital imperatives and locations, such as Silicon Valley and Seattle.

Similarly, Baidu, Tencent, Alibaba and others are restructuring Asian economies. Already in India, firms such as Flipkart are making major inroads into a restructuring the Indian economy.

The Digital Raj means that everything must be re-thought and re-wired (or more precisely, un-wired): infrastructure, healthcare, education, financial systems, and most dramatically, agriculture. This will result in dislocations of people, places, programs and priorities. History demonstrates conclusively, that those who embrace new technologies empower themselves and create untold opportunities.

From such changes come great opportunities. Great opportunities occasion a defining moment for action. This is India's moment!

- Dr. Richard Oliver
Chair SKILLS 2017

EVERYONE IS GOING DIGITAL

NATIONAL DIGITAL TRANSFORMATION INITATIVES

Here are some brief examples of other countries undergoing a digital transformation.

China is the global e-commerce leader accounting for 40% of all Internet transactions and the third largest venture investor (both government and private) in other digital initiatives such as in autonomous vehicles; 3-D printing; robotics, drones, and Artificial Intelligence (AI). The government is making a $ 180 billion investment in 5G mobile. The country has a number of central and state initiatives:- Becoming the center of AI innovation by 2030; Guangdong Province's goal of 80% automation by 2020; and Xiongan as the first "smart city" for autonomous vehicles. China boasts one in three unicorns (valued 1 $ billion at start-up), Internet giants Alibaba; Baidu; Tencent; Taobao; Meituan-Dianping; Didi Chuxing; Face++, and a $ 15 billion surplus in digital services exports.

In 2002, Estonia's program 'e-Estonia' declared access to the Internet a human right and provided free WiFi across country. In 2012, Estonia initiated e-voting; E-Residency (transnational digital identity for location-independent online business) with 1500 from 73 countries; and in 2017, Estonia announced the "estcoin", the world's first national crypto currency.

In 2010, Columbia's Plan Vive Digital (Live Digital Program) announced 4G Internet access for every citizen. In 2016, Columbia's Vive Digital for People supported widespread adoption of technologies: 890 digital Labs and 6.7K Telecenters for access skills training; 272 WiFi zones; 200 e-Government services; and a series of polices for transformation of education, health, and justice. The Digital Economy program intends to transform many of the country's economic policies.

In 2016, Saudi Arabia announced "Vision 2030" National Transformation Program that provided transformation of 24 government departments and in 2017, built NEOM, a $ 500 billion digital metropolis.

The Africa Center for Economic Transformation's "Vision 2063' details the region's plan to integrate and join the global economy. This will require developing human capital through education and training, especially in science, technology, and innovation. It will also need accelerated infrastructure development to link African economies and people to meet the targets set for energy, transport, and information and digital communication technologies. Meaningful partnerships with the private sector will need to be established.

The World Economic Forum tracks digital transformation programs in over 100 countries and regions.

INAUGURAL SESSION

Speakers (from left): Dr Ravi K. Reddy, Secretary, REEDS; Mr. Vinod G, Former Minister – Labour and Employment, Government of AP; Dr. Richard Oliver, Chair, SKILLS 2017; Dr. Sailaja, Officer on Special Duty, Telangana Academy for Skill and Knowledge; Dr.KP Wasnik, Additional Commissioner (Extn), Department of Agriculture, Government of India ; Mr. Dan Coholan, Vice-Chairman, Royal Bank of Canada, Canada; and Mr. Ravindra Vikram, Chair, REEDS.

In this opening session, a diverse set of speakers outlined a framework to leverage the Digital India initiative for rural empowerment..

DIGITAL WORLD

5 0 Speed
2 Hr. Movie;
3.6 Sec

$898 B

30 B
Connected
Devices
(2020)

5.5 B
Google
Searches/
day

$766 B

Tencent 腾讯
$531 B

Microsoft
$680 B

731 M
Users: 25%
of world

1 B
Web
Servers

Alibaba.com
$498 B

amazon
$592 B

$543 B

69% of
Population:
3G Service

$ 205B
Advertising
$ 2.IT Internet
Influenced Sales
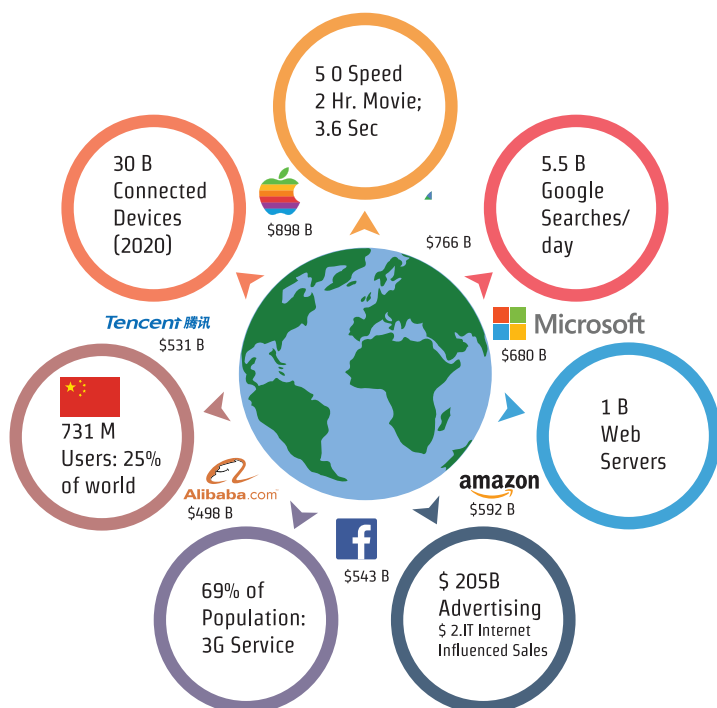
*Market Cap 1.2018

The extensive penetration of digital technologies globally and in India was outlined (See Infographics). Several dimensions of this technology were described: rapid deployment; ability to dramatically transform and even destroy industries and organizations; and wide spread availably of digital devices. However, there is often lack of concomitant skills development, particularly in rural environs. The need for special focus on rural areas was noted, as digital transformation tends to centralize development in urban areas. If India is to take its rightful place among the world powers, rural India must be included in the Digital India initiative.
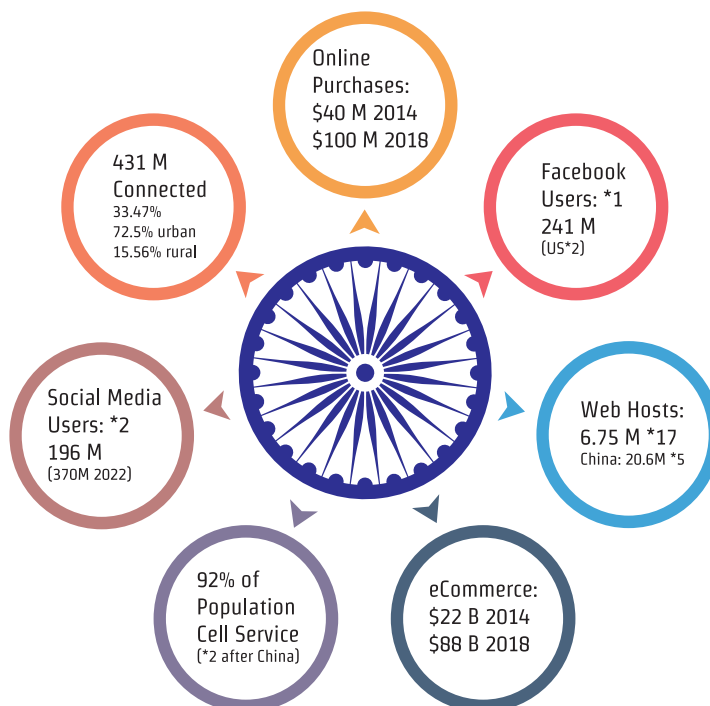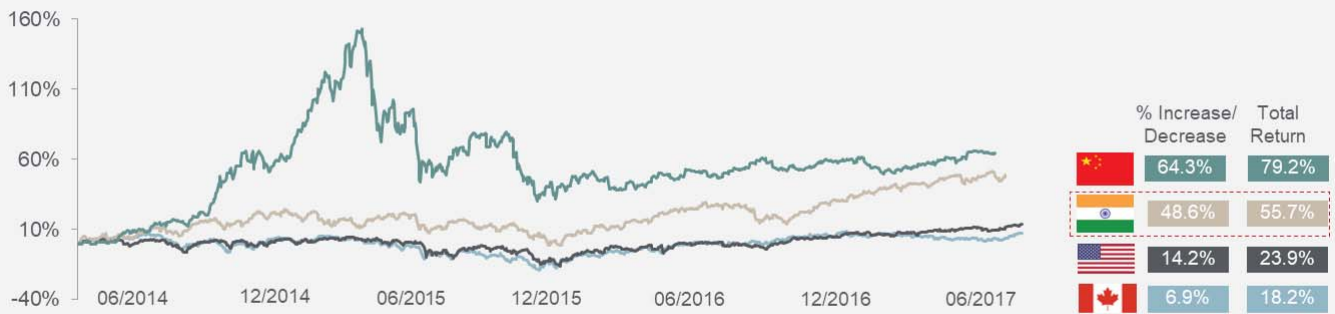
While outlining the significant efforts already undertaken by various agencies, speakers noted the necessity of cooperation between central, state and local governments, the private sector and NGOs to provide new levels of digital skills training. Of particular importance, it was noted that the large population in rural areas, primarily employed in agriculture, dictated the need for extensive, but streamlined skills development.

To ensure the success of Digital India, massive investments in Indian infrastructure would be necessary. Dan Coholan, Vice-Chairman, Wealth Management, Royal Bank

DIGITAL INDIA

Online
Purchases:
$40 M 2014
$100 M 2018

431 M
Connected
33.47%
72.5% urban
15.56% rural

Facebook
Users: *1
241 M
(US*2)

Social Media
Users: *2
196 M
(370M 2022)

Web Hosts:
6.75 M *17
China: 20.6M *5

92% of
Population
Cell Service
(*2 after China)

eCommerce:
$22 B 2014
$88 B 2018

of Canada presented the compelling story of the Canadian perspective on investing in Indian infrastructure. In particular, Coholan cited the investments by the Canadian Pension Plan Investment Board. From the point of view of Canadian investors, India was described as a positive location for investments because of its attractive population size, supportive public policy, minority rights, trustworthy and viable local partners, and the ability to deploy significant amounts of capital to support large scale projects.

CANADA PENSION PLAN INVESTMENT BOARD (CPPIB)

Total commitments
$3.07 billion

KEY INVESTMENTS
$1.54 b to buy 6% in Kotak
$555 m in GlobalLogic
$770 m in funds, including Apax Partners, KKR, TPG, Blackstone and Vishal Nevetia's IVFA and co-investment in ATC Broadband
$300 m in Renuka Ramnath's Multiples

OTHERS
Phoenix Mills, L&T IDPL, JVs with Kotak Mahindra, Shapoorji Pallonji

CDPQ
Target
To deploy $3 billion by 2016
$1.3 billion already deployed in Indian equities

KEY INVSTMENTS
$700 million in Edelweiss ARC over 4 yrs
$180 million in TVS Logistics
$150 million in Indian renewable sector
$850 million Resurgent Power – JV with Tata Power, ICICI Venture KIA & Oman's SGRF

ONTARIO TEACHER'S PENSION FUND
$200 million in Snapdeal

PSP INVESTMENTS
Isolux Corsan's 4 road projects

Total pension pool for **35 million Canadians $1 TRILLION**
Estimated **$5-5.5 bn** invested in 2016 alone

BROOKFIELD
Committed $4.6 billion so far
KEY INVESTMENTS
$1.6 b to acquire RCom's tower assets
$1 b Hiranandani office portfolio
$500 m commitment for SBI-Brookfield stressed assets JV
OTHERS
6 road & 3 power plants of Gammon Infra
Unitech Corporate Park
₹1,200 cr JV fund with Peninsular Land for loans to residential developers

FAIRFAX
MAJOR DEALS
Committed $1 billion
$378 m in GVK's Bangalore International Airport
$300 m in Sanmar Group
$201 min India Infoline
OTHER DEALS INCLUDE: Acquisition of Thomas Cook India, Sterling Holidays, Ikya, 26% in ICICI Lombard
IN TALKS
To acquire controlling interest in Catholic Syrian Bank

Stock Market Returns
(% Increase/Decrease) [3]

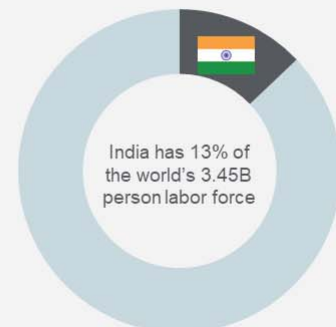|	% Increase/Decrease	Total Return
🇨🇳	64.3%	79.2%
🇮🇳	48.6%	55.7%
🇺🇸	14.2%	23.9%
🇨🇦	6.9%	18.2%

(1) Source: OECD Economic Outlook (June 2017) (2) Worldbank-2016 (3) Bloomberg - June 2, 2014 to October 6, 2017

Real GDP Growth & Forecasted Growth
(%) [1]

India, China, World, USA, Canada
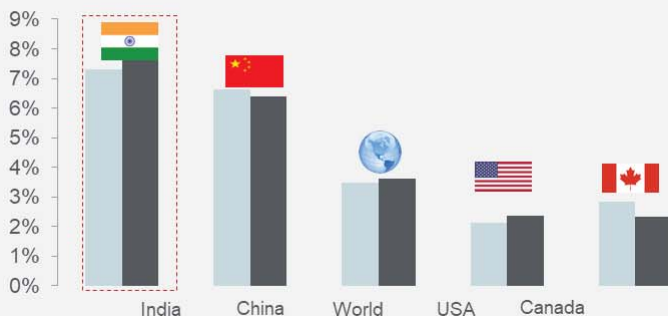
Population in the Labor force
(%) [2]

India has 13% of the world's 3.45B person labor force

"CPPIB is a significant investor in India... We believe India will be a leading source of global growth in the coming decades and that there will continue to be attractive investment opportunities for CPPIB. Our long investment horizon aligns to the financing and capital needs of India's economy, entrepreneurs and businesses. We will continue to seek investment opportunities in India that meet our investment criteria."

– Suyi Kim
Managing Director, Head of Asia Pacific,
Canadian Pension Plan Investment Board

"Potential impact of digital solutions in realizing UN SDGs: 1.38% GDP growth generated from a 10% increase in broadband penetration in developing regions."

– Bruce Weinelt
Head of Digital Transformation World Economic Forum; and
Mark Knickrehm, Group Chief Executive Accenture Strategy

Summary: India is not alone among countries seeking to transform of their economy and society with digital technology. India's bold and comprehensive initiative along with the massive size of the projects and favorable demographics make it a prime location for those wishing to invest large amounts of capital.

SESSION #1:

DIGITAL INFRASTRUCTURE FOUNDATION FOR SUCCESS

Speakers (from left): Dr. BVR Mohan Reddy, Founder and Executive Chairman, Cyient, Ltd., India; Mr. Suresh Kumar, IAS (Retd), Former Principle Secretary, Department of Agriculture, Government of Maharashtra: Dr. Carrie Oliver, Founder and Managing Director, Yare Group, London, UK; Dr. Ranjan Patnaik, Technology Director, South Asia & ASEAN, DuPont Co.

This instructive session presented a critical overview of the importance of infrastructure for Digital India from several diverse perspectives. All agreed that Digital India is important and if managed correctly, will have a profound and important impact on India's rural population.

Dr. Mohan Reddy succinctly outlined the key challenges and identified some possible solutions (See Sidebar). One of the challenges outlined was the need to effectively manage the transformations process, particularly in the public sector.

SIDEBAR: DIGITAL INDIA: CRITICAL CHALLENGES & ADVANCES: BY DR. BVR MOHAN REDDY, FOUNDER AND EXECUTIVE CHAIRMAN, CYIENT, LTD	
KEY CHALLANGES	POSSIBLE SOLUTIONS
Connectedness: People & Devices • Worldwide 49% of population online. • 8.4 B 'things/ sensors' connected things are in use worldwide. Billions of embedded electronic By 2020, 20 B (estimate) people and things online. • Optical fiber in nearly 1.0 Lakh GPs (out of total 2.38 Lakhs), but only 22,000 GPs have Internet connectivity due to equipment procurement issues. Second phase 1.50 lakh GPs by 2019. 31,000 public Wi-Fi hotspots in India but to match global average (1/150 people), additional 80 lakhs hotspots needed.	• Microsoft White Space, using the unused spectrum already deployed in Kenya, Singapore, the U.S. and London. • Face book's Aquila solar-powered drone beaming down internet from the skies using lasers. • Google Project Loon: Network of floating balloons to help provide internet connectivity to rural and remote areas.
Information access: Computing, Connectedness & Storage: • Computing speed doubling every year; similar transformation in storage and communication.	• Advent of distributed computing rapid development of smart devices packed with sensors and the Internet of things.
Content/ Applications/ Devices: • Limited content available in digital format and using the content outside of India might not be fully relevant to our requirement. Localization into various languages will increase penetration.	• A number of Indian universities have launched their own MOOCs, often in collaboration with American universities & leverage content from international MOOCS for Indian students. • Government announced its own platform called Swayam..
Digital Literacy: • 40% of 650,000 villages & 2,50,000 Panchayats representing 3 million Panchayat members living below poverty line with illiteracy rate more than 25-30% & digital literacy almost non-existent among more than 90% of India's population.	• National Digital Literacy Mission Programme, a dynamic and integrated platform of digital literacy awareness, education and capacity to help rural communities participate in global digital economy..

MORE KEY CHALLANGES

Capacity, Reliability, Coverage, Maintainability:

- Better capacity, reliability and maintainability of the existing connections needed.
- Most Indian broadband focused on bigger cities.
- Only 60 % of India's 450,000 telecom towers in non-urban areas.
- Estimated minimum additional 60,000 to 100,000 towers required for national connectivity.

Digital Divide: Last mile connectivity in remote rural areas:

- Over 55,000 villages deprived of mobile connectivity as not commercially viable for service providers.

Regulatory Roadblocks:

- Taxation & regulatory guidelines & contracting challenges have slowed deployment, including lack of clarity in FDI policies, impacting the growth of e-commerce.

Technology adoption and Change Management:

- Challenge around change management as the government has been working in a particular way & defined process, and now completely different environment needed.

Data Governance:

- India has biggest data repository in the world now challenged in using information for better governance.
- Huge projects like Aadhaar, passports and the inception of MCA 21 bring challenges regarding the right governance of such public sensitive data.

Cyber Security:

- Comprehensive cyber security laws needed to empower agencies to manage incidents quickly and mandate reporting.

"I am particularly optimistic about the potential for technological innovation to improve the lives of the poorest people in the world."

– Bill Gates

Dr. Carrie E. Oliver, a transformation specialist who has managed extensive transformation programmes in the EU for both public and private sector organizations, presented on the importance of investment in 'delivery capability' as well as "physical capability and infrastructure' for the success of digital transformation programmes.

Dr. Oliver cited studies by the global consulting firm McKinsey & Co. who found that 70% of transformation programmes failed but success rates were greatly enhanced by investment in delivery capability. [Links noted below[2]].

Dr. Oliver suggested that the focus of many organizations on hiring and developing strong engineering capabilities failed to recognize the need for more effective integration between IT and the whole business or organization. To support this, Oliver shared the eight main causes for major IT programme failure identified by the British Government (See Sidebar). They are grouped into three important areas of capability: business management, stakeholder management and project management.

Dr. Oliver expanded on each of these capabilities:

BUSINESS MANAGEMENT

◉ Strategic vision – clarity of the strategic vision, with a clear focus on outcomes

◉ Governance - translation of strategic visions and desired outcomes into criteria to select priorities and then measure the outcomes of the work

◉ Disciplined agility – critical because of the fast pace of change and the speed of new technologies. The pressure to "stay current" and excitement of the "new, new thing", often translates into investment in technologies or initiatives that do not deliver value and do not address the underlying problems or needs.

STAKEHOLDER MANAGEMENT

◉ Stakeholder Management - the systematic identification, analysis and planning of actions to communicate with, negotiate and influence those who have an interest or role in the project or who are impacted by the project.

◉ Integration – both "macro" stakeholders (whether government, Silicon Valley or organizational leaders) and the extremely local end users

PROJECT MANAGEMENT OR EXECUTION SKILLS

◉ Initiation - Governance and organization, business case, planning, cost management.

◉ Design – stakeholder management, benefits management.

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[2] Links: "More than 70 percent of transformations fail.' https://www.mckinsey.com/business-functions/organization/our-insights/how-to-beat-the-transformation-odds "Investing in capability increases your chances of success significantly.' https://www.mckinsey.com/business-functions/organization/our-insights/how-to-beat-the-transformation-odds

- Execution - product description, risk and issue management, reporting, change control, quality control, configuration management.

- Close - lessons learnt, post-project review.

- Transparency – not only on costs and delivery timings but also acknowledging when you are on the wrong side of a "technology" call which is critical with the current pace of change in technology.

SIDEBAR: DIGITAL INDIA: CRITICAL CHALLENGES & ADVANCES BY DR. CARRIE OLIVER, FOUNDER AND MANAGING DIRECTOR, YARE GROUP, LONDON, UK		
8 Main Causes for Failure*:		
• Lack of clear links between the project and the organisation's key strategic priorities, including agreed measures of success.	• Lack of effective engagement with stakeholders.	• Lack of skills and proven approach to project management and risk management.
• Lack of clear senior management, ownership and leadership.	• Lack of understanding of, and contact with the supply industry at senior levels in the organisation.	• Too little attention to breaking development and implementation into manageable steps.
• Evaluation of proposals driven by initial price rather than long - term value for money (especially securing delivery of business benefits).	• Lack of effective project team integration between clients, the supplier team and the supply chain.	
Business Management	**Stakeholder Management**	**Project Management**
* The UK Office of Government Commerce 'Best Practice' Guidance.		

Dr. Ranjan Patnaik, Technology Director, South Asia & ASEAN, DuPont Co., shared his experiences on how digitization infrastructure in India is affecting or is projected to influence the workforce in science, technology and innovation. Patnaik emphasized that "Digital India must cut across multiple industry verticals and run deeper into our social fabric, including rural India, to ensure a sustainable development model that is inclusive."

Summary: India faces a number of challenges but digital technologies can address many of them. In undertaking Digital India, it must be realized that the scope of the impact transcends the IT industry and impacts the entire economy. The critical management requirements for successful large-scale transformation projects are well understood and documented.

SESSION #2:

FINANCIAL INCLUSION OR ILLUSION: THE FIRST CRITICAL CHALLENGE

Speakers (from left): Mr. Ravindra Vikram M. Senior Partner M. Anandam & Co., Chartered Accountants; Dr. Ravi Kota, IAS Principal Secretary Department of Finance Government of Assam; Mr. Manas Ranjan Mohanty, General Manager, Human Resource Management Department, Reserve Bank of India; and Ms. Ruchi kemka Vice President – CSR Deutsche Bank Group in India.

Mr. Ravindra Vikram M opened the session by noting the issue of financial inclusiveness in India is not new but has been a concern for many years. When the banks were nationalized in 1969, one of the objectives of nationalization was to be able to provide banking opportunities for the poor. Vikram referenced the program Jhan Dhan Yojana (National Mission for Financial Inclusion). Digital India has added new hope that these opportunities can finally be achieved. Vikram then introduced the esteemed panel. A summary of their remarks follows.

Ms. Ruchi Khemka, Vice President, CSR, Deutsche Bank Group (India), began by identifying the CSR mandate of the bank that works in the areas of education, healthcare and water. Khemka noted that of the 25 crore households in the country, one third are unbanked. These households want access to bank accounts, loans, insurance, pensions and healthcare, etc.

Khemka noted that one third of the bank accounts opened in 2015 have become dormant and argued that while extensive government and public service programs are in place, there is still a critical need to improve literacy, including financial literacy. This should be started with the young and women. Programs need to be established to encourage appropriate financial practices.

One innovative program Khemka cited was establishing Chief Minister Fellows in 1000 villages to work with the village council and ensure that people are linked to government programs. Another innovative program suggested was a government of Maharashtra's scheme to ensure that a check dam (a small, sometimes temporary, dam constructed across a waterway to counteract erosion and/or conserve water) is constructed as a part of the entire scheme to employ local people. The work is now occurring in the first set of 200 villages.

Mr. Manas Ranjan Mohanty, General Manager, HRM Department, Reserve Bank of India (RBI) noted that while the government of India, the RBI, and state Governments want to serve the billions of people living in rural areas, it was not feasible financially or physically. There is insufficient infrastructure in place to reach out to 640,000 villages. Much has been accomplished in past 10 years, however, there have been new technology and changes in the banking system. These include: redefining the bank branch; development of new institutions such as the small finance banks and the payment banks; and the Indian Post has become a payment bank.

To achieve financial inclusion, the new financial eco system raises several questions. What is the cost of moving to a less cash economy? Is less cash more beneficial to the poorest of the poor? How to move that 50 percent of the informal economy to formal economy in a stable and sustainable manner? These are challenging questions for India.

Another concern for RBI is "fintech" - financial technology start-ups developing independently or in collaboration with banks. Is this going to change the landscape of banking? This is occurring in India and across the world. Major changes in technology disrupts businesses and changes society in a disruptive way. Regulators want a sustainable change. In a country like India where the social security fabric is not robust, disruption must be managed more efficiently than in many other countries.

Disruption is different for the poor. Therefore, the changes taking place at the Central Bank focuses on consumer awareness, consumer protection and levelling the "playing field" between corporate customers and the customer at the last mile. There are significant issues that must be addressed: data integrity, data privacy, and the way the data is moved. Also, can products be matched to be with compatible with the cash flow needs of the poor? These

challenges are going to highlight or reduce the shadow of illusion and bring the reality of inclusiveness to India.

India needs to create a credit culture - that tells people that it is in their interest to pay back loans. Prosperity is creating an entrepreneurial and responsible credit culture that is robust and solid.

In terms of demonization, research initially shows there was a lot of cash coming into bank accounts. So that means that "financialisation" of cash saving was taking place. Why is this important? A recent high-level study showed that most of the people in India, including the middle class, have the majority of their assets in gold and land. These are very illiquid assets that are much more susceptible to the pro-cyclical nature of the economy.

There is a need to educate the middle class as well as the poor to move to financial products, for example - insurance. Most of the poor in India are just one digit away from poverty. Even people who are above the poverty line, the lower middle class need insurance.

We have to formally move to "financialisation" by creating a social security arrangement so that the development of India will be sustainable – because the youth of this country are going to have long lives.

"Financial inclusion has been identified as an enabler for seven of the 17 Sustainable Development Goals. The World Bank Group considers financial inclusion a key enabler to reduce extreme poverty and boost shared prosperity, and has put forward an ambitious global goal to reach Universal Financial Access (UFA) by 2020."

– www.worldbank.org

Dr. Ravi Kota, IAS, Principal Secretary, Department of Finance, Government of Assam discussed a special case study from Assam:

- Financial Inclusiveness is difficult because India is so vast and diverse

- Assam grows 55% of India's tea, but has huge differences in size of farms

- Geography and topography create unique problems as does the cash-oriented culture of pay and spend.

- Demonetization created significant disruption in Assam but also creative solutions to problems.

- Major issues to overcome: inaccurate assumption of large numbers of existing bank accounts; cash culture; communications connectivity; lack of Customer Service Points (CSPs); biometrics don't work with tea worker "altered" finger prints; vested interests of management and labor organizations.

- Assam Government programs transformed more of the system in 70 days than in previous 70 years (e.g.: 6.5 lakhs accounts opened); mobile CSPs; cooperation with RBI and others to facilitate new payments systems and rules.

- Government can't solve all problems. Long term solutions and skilling are needed. One very encouraging sign: bright, young university graduates passing up higher paying jobs to work with us to solve some of these complex issues!

"To leverage its demographic dividend and effectively manage its demographic transition, India will need to find a way to include its 800-million-strong rural population in the nation's economy. Only programs that can deliver maximum impact at minimum cost (including funding and time) will pass the test presented by India's fast-changing demography. Digital technologies can help by enabling more effi cient use of scarce resources to deliver greater and more enduring value to benefi ciaries, quickly. - Demographics, Digitalization and Development are India's path to inclusive growth."

- www.accenture.com

NEED INNOVATIVE / DISRUPTIVE TECHNOLOGY

LESSONS / CHALLENGES????

ACCOUNT OPENING
- CSP efficiency
- Bad Finger-prints
- Connectivity
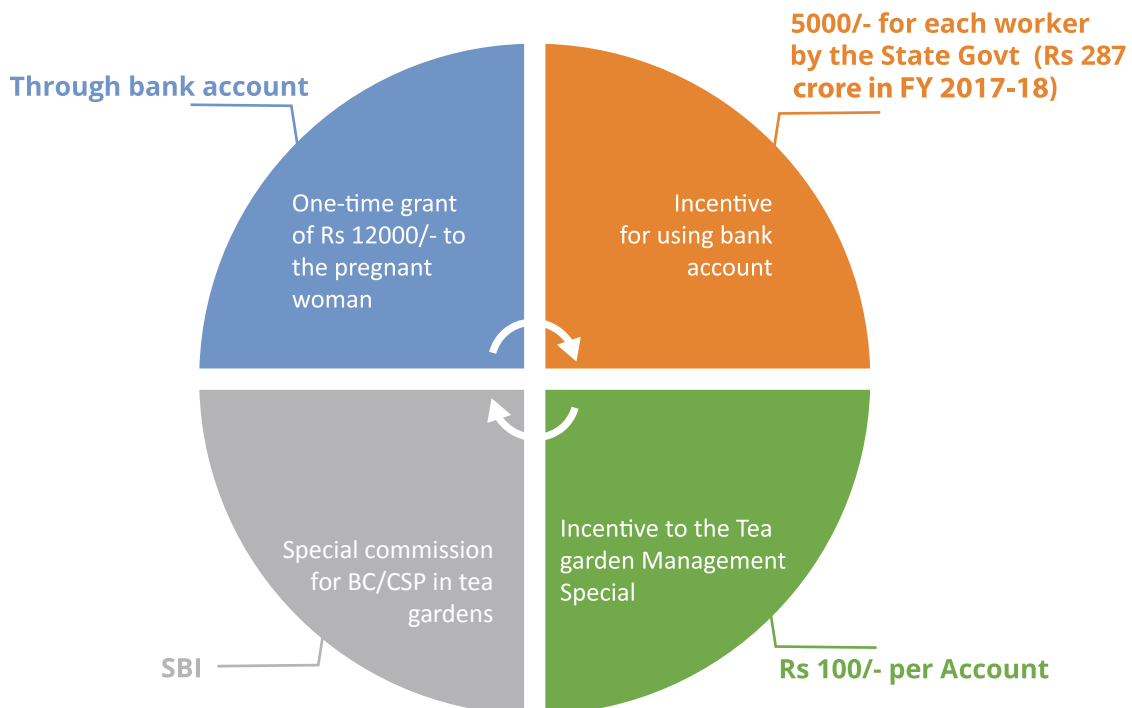- Activation of account/Passbook
- RuPay Card activation

CASH DISPENSATION
- Travel to the Bank branch
- BC/CSP limitation
- Few ATMs

HAAT ECONOMY
- Only Cash
- Vested interest

ASSAM'S POLICY INNOVATIONS / INCENTIVES

Through bank account

5000/- for each worker by the State Govt (Rs 287 crore in FY 2017-18)

One-time grant of Rs 12000/- to the pregnant woman

Incentive for using bank account

Special commission for BC/CSP in tea gardens

Incentive to the Tea garden Management Special

SBI

Rs 100/- per Account

STILL IT IS TOO LITTLE AND TOO LESS; NEED MORE COLLOBORATIONS

Mr. Vikram closed the session by noting that all the speakers emphasized the need for skills in financial literacy to deal with the speed of technology and complexity that 'nancial inclusiveness entails. A spirited question and answer session followed.

Summary: Financial inclusiveness has been a long-standing goal, and Digital India portends the opportunity to finally achieve it. Simply putting the technology in place does not guarantee success however, as both the middle class and the rural population need to be skilled in its use and opportunity; for example, creating a credit culture. Achieving financial inclusion is a pre-requisite to achieving Digital India.

SESSION #3:

DIGITAL EDUCATION DELIVERING THE DEMOGRAPHIC DIVIDEND

Speakers (from left): Mr. Anand Sudarshan, Founder and Director at Sylvant Advisors; Ms. Raquel Shroff, Group CEO, Global Education Services, Australia; Dr. Amarnath Raja, Executive Chairman, InApp; Mr. Ramesh K Raju, Technical Writer– NXP Semiconductor; and Prof. K.C. Reddy, Former Chairman of the AP State Council of Higher Education.
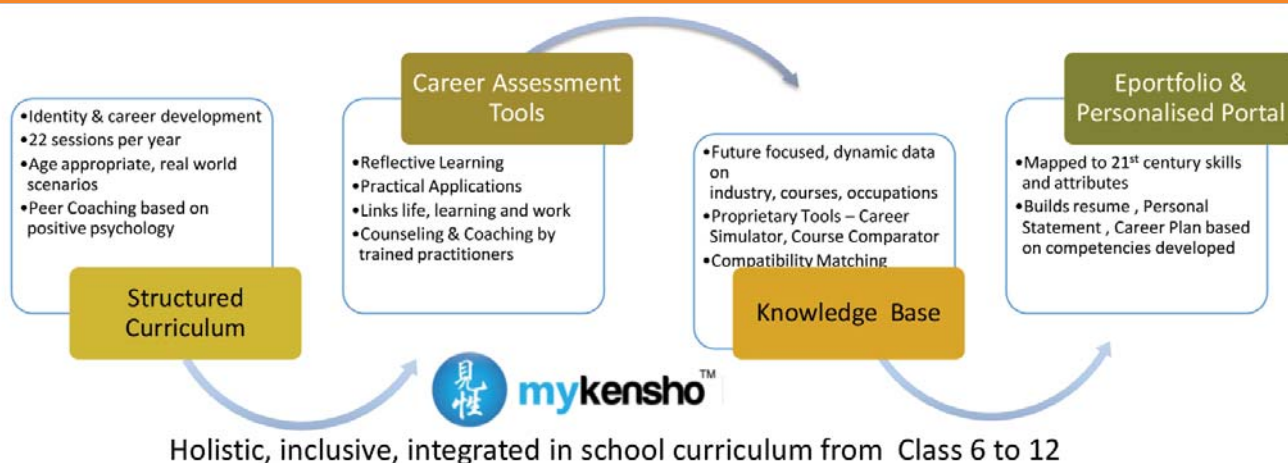
Mr. Raja described how the State of Kerala's Government Schools use free and open source software like LINUX that allows school students to learn, understand and modify the software. This saved the exchequer over Rs. 300 Cr in software licensing costs. Raja also mentioned a unique InSight project for the blind successfully implemented in the State that uses computers and in open source software.

Mr. Anand Sudarshan stressed the importance of digital education to develop India, noting that the context is as important a part of digital education as the content. Sudarshan noted that there was a significant discrepancy between people entering the workforce and the availability of jobs (8-9 million people entered for only 2.5 million new jobs). This created a need for work-directed learning. Also, rural job and life aspirations are getting shaped due to migration from rural to urban settings. Digital education is one solution that can help ensure the achievement promised by India's demographic dividend.

Prof K. C. Reddy stressed the interrelationship and need for investments in digital education and technology development in the rural sector similar to those investments in other sector such as health care and social infrastructure.

Two case studies illustrated how the use new digital technologies in the formative years is enhancing student well-being, engagement, academic achievement, core skills development and improving education outcomes. Raquel Shroff presented Mykensho, a holistic, inclusive, technology enabled solution that can be seamlessly integrated in any school curriculum from class 6 to 12. The personalised digital platform, combined with the careers curriculum, training on positive education pedagogy and mentoring of teachers all year round, is transforming quality of education across diverse range of school systems in India.

BY MS. RAQUEL SHROFF, GROUP CEO, GLOBAL EDUCATION SERVICES, AUSTRALIA
SIDEBAR CASE STUDY: EARLY CAREER EDUCATION INTERVENTION IN SCHOOLS

Structured Curriculum
- Identity & career development
- 22 sessions per year
- Age appropriate, real world scenarios
- Peer Coaching based on positive psychology

Career Assessment Tools
- Reflective Learning
- Practical Applications
- Links life, learning and work
- Counseling & Coaching by trained practitioners

Knowledge Base
- Future focused, dynamic data on industry, courses, occupations
- Proprietary Tools – Career Simulator, Course Comparator
- Compatibility Matching

Eportfolio & Personalised Portal
- Mapped to 21st century skills and attributes
- Builds resume, Personal Statement, Career Plan based on competencies developed

見性 **mykensho**™

Holistic, inclusive, integrated in school curriculum from Class 6 to 12

An employability skills framework where developing self-identity during adolescent years is foundational to skills development and employment outcomes.
- global best practice model adopted in Singapore, Korea, Finland, Australia, UK.

INDIAN CAREER EDUCATION & DEVELOPMENT COUNCIL

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Achievement   **well being**   **career decision making competencies**

+30%   +62%   +87%

-51%

changing subjects

mykensho

- career decision making competencies - self-awareness; opportunity awareness; certainty of preference; conflict resolution and transition skills.
- well being - emotional skills, confidence, resilience, mindfulness, gratitude
- Strong relationship between the students' career direction and academic performance
- Early identification and better management of students at risk
- Improvements in aspirations among lower SES background
- Improved attitude to school, technical and vocational education
- Happiness Index - sense of belonging, study-work-life balance, attitude towards school
-

INDIAN
CAREER
EDUCATION &
DEVELOPMENT
COUNCIL

Mr. Ramesh Raju, Lead Technical Writer at NXP Semiconductors, described how "user centric methodology" increase the efficacy of learning by replacing traditional printed or online help with visual, auditory and kinaesthetic materials according to individual learners' styles.

Illness prevented Dr. Jaya Indiresan from attending the conference, but her presentation is well worth describing here. Indiresan "way forward" is described succinctly in her '4 C' model: C - Raise the Consciousness about available digital infrastructure; C - Induce a sense of Concern to use them; C - get the Commitment to Change; and C - Develop Competence through Capacity Building. Based on extensive experience in successfully implementing rural education programs, Indiresan described the needed steps: Develop a viable and relevant training program suitable for the illiterate population; use audio visual materials; intersperse formal teaching with hands-on experience; "hand holding" to build confidence; select competent and committed facilitators; and conduct intensive and hands-on train the trainers workshops.

SIDEBAR: DIGITAL EDUCATION: DELIVERING THE DEMOGRAPHIC DIVIDEND BY DR. JAYA INDIRESAN. EDUCATIONIST, TRAINER & SOCIAL RESEARCHER

◉ The 4 C formula

1. C- Raise the Consciousness of the available infrastructure

2. C- Induce a sense of Concern to use them

3. C - Get the Commitment to Change

4. C- Develop Competence through Capacity Building.

> "India is the world's largest experiment in digitalisation."

– B. Santhanam,
Saint-Gobain India

Summary: Concomitant with the creation of digital education programs is the need to create jobs for the newly trained and aspiring youth of India. There are excellent examples of implementation models at the local, state and regional levels that offer real guidance on the path forward.

SESSION #4:

DIGITAL RX FOR RURAL HEALTH

Speakers (from left): Dr. G. Vivekananda, Advisor, Inter-state Affairs Government of Telangana; Mr. Gerald Jaideep, CEO Medvarsity; Dr Srinivasa Rao Pulijala, CEO, Apollo MedSkills; Dr. J. Satyanarayana, IAS, Chairman UADAI, Advisor for Govt of Andhra Pradesh, eGovernance; and Mr. Bobba Venkatadri, General Partner, Ventureast.

This session focused on the enormous opportunity for digital technologies to improve all aspects of healthcare in India. Activities already underway, both in India and abroad, take health into new realms of discovery and delivery. In particular, the combination of biotech and information technologies portend a significant new understanding of an improvement in health of India. The greatest impact will be with the rural population who have the little effective healthcare today. Considerable innovation in health technologies is coming from entrepreneurs supported by venture funds and traditional healthcare providers. Speakers outlined the enormous size of investments and the various investments areas. (See Sidebars)
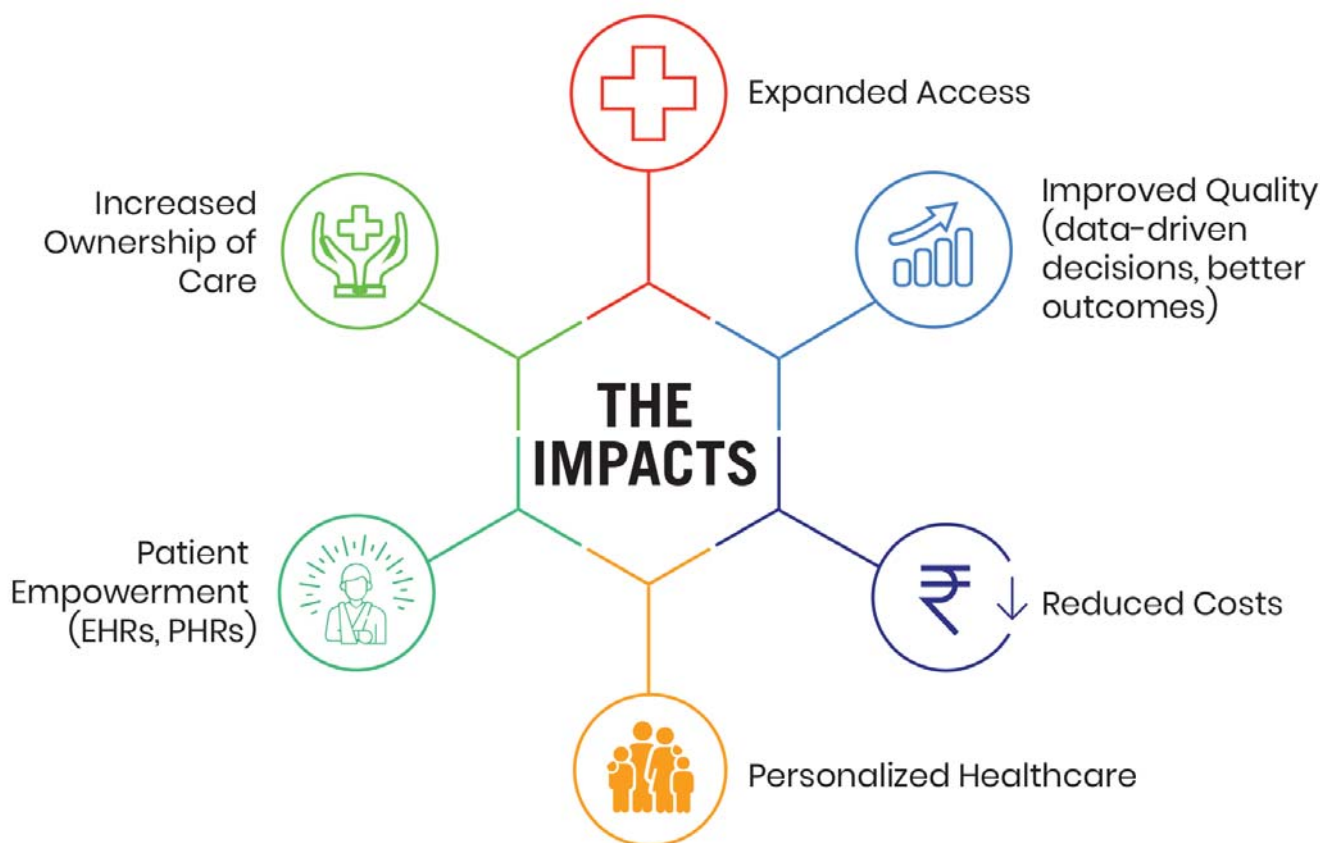
Bobba Venkatadri described some of the key concerns of the current healthcare system in India: accessibility, quality, and affordability. These concerns are manifested by: lack of availability of doctors and access to primary care in rural areas; disconnected delivery system; and growing public anger and distrust of the system. In describing the problem, Venkatadri said, "The killer is not a shortage of oxygen but the gross misallocation and waste of resources." He also provided an extensive overview of current and potential investments in healthcare, noting in particular the value of telemedicine. A U.S. study found that a large dollar savings (9Xs savings on investment) resulted in the resolution of 92% of medical issues with no follow-up required. Venkatadri also provided a "playbook" for healthcare entrepreneurs (See Sidebar), and noted that other underdeveloped countries provide better healthcare than India

WHAT'S HAPPENING?

20,251 sub-centers in UP and not one meets public health standards

Basic medical services at a district hospital ~200 km away

16% of nation's population gets 9% of public health funding

Severe shortage of govt doctors in UP: 1 for every 19,000 people

The killer is not a shortage of oxygen but the gross misallocation and wastage of resources
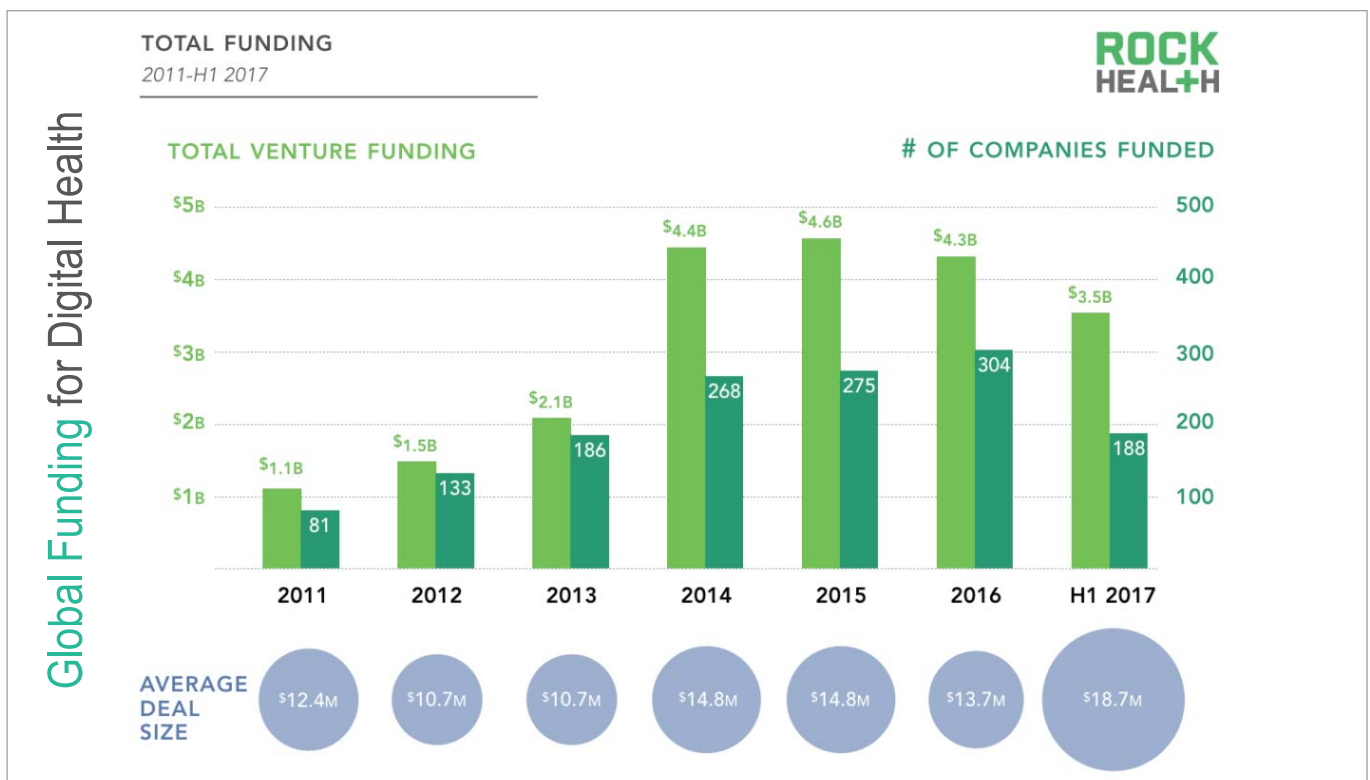
HEALTHCARE MARKET

NOTE: NOT TO SCALE

$7.6 trillion

$3 triillion

$100 billion

TOTAL WORLD MARKET

TOTAL US MARKET

TOTAL INDIA MARKET

Global Funding for Digital Health

TOTAL FUNDING
2011-H1 2017

ROCK HEAL+H

TOTAL VENTURE FUNDING

OF COMPANIES FUNDED

Year	Total Venture Funding	# of Companies Funded
2011	$1.1B	81
2012	$1.5B	133
2013	$2.1B	186
2014	$4.4B	268
2015	$4.6B	275
2016	$4.3B	304
H1 2017	$3.5B	188

AVERAGE DEAL SIZE

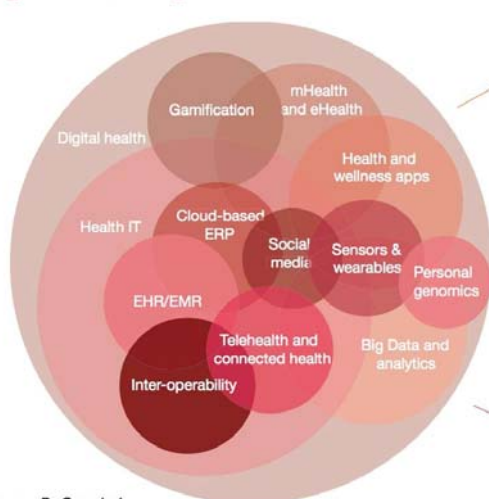| 2011	2012	2013	2014	2015	2016	H1 2017
$12.4M	$10.7M	$10.7M	$14.8M	$14.8M	$13.7M	$18.7M

Winning leap solutions for alternative healthcare delivery

Digital health ecosystem

Digital health components

Source: PwC analysis

Shifting point of care
Non-critical patients recuperate at home, reducing average length of stay in hospitals
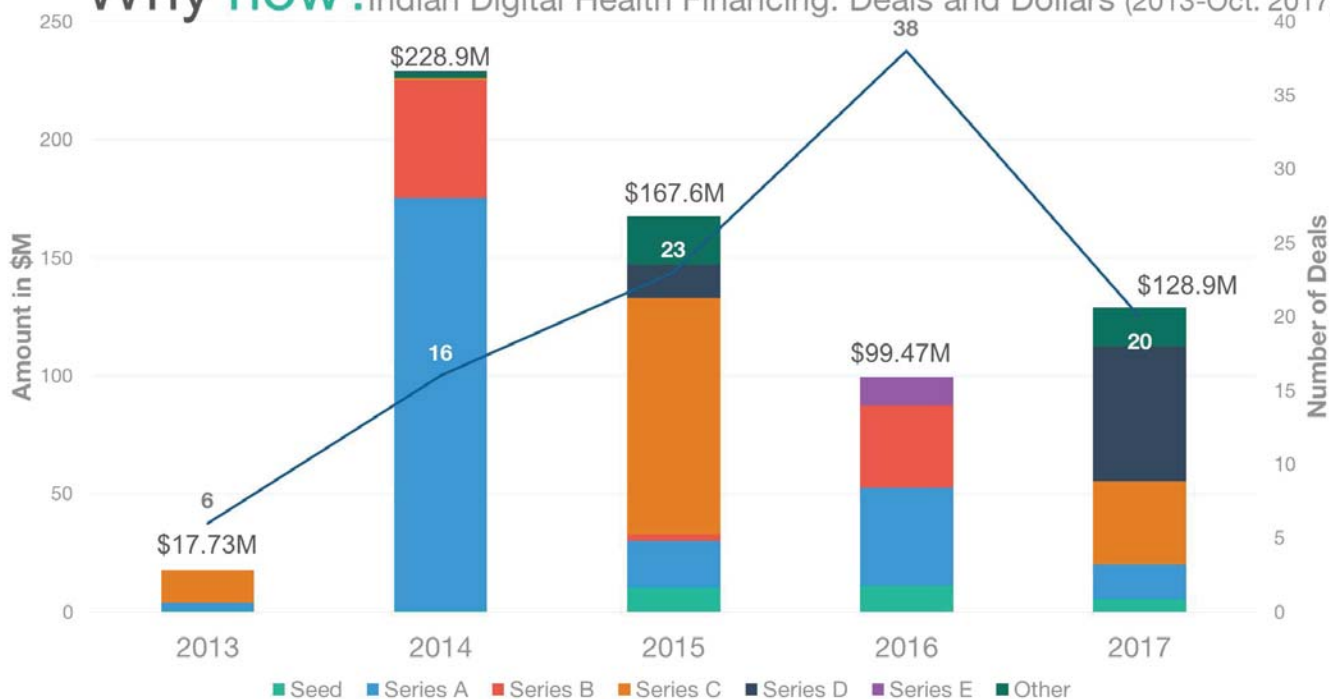
+

mHealth
Technology-enabled solutions to reduce stress on hospital infrastructure
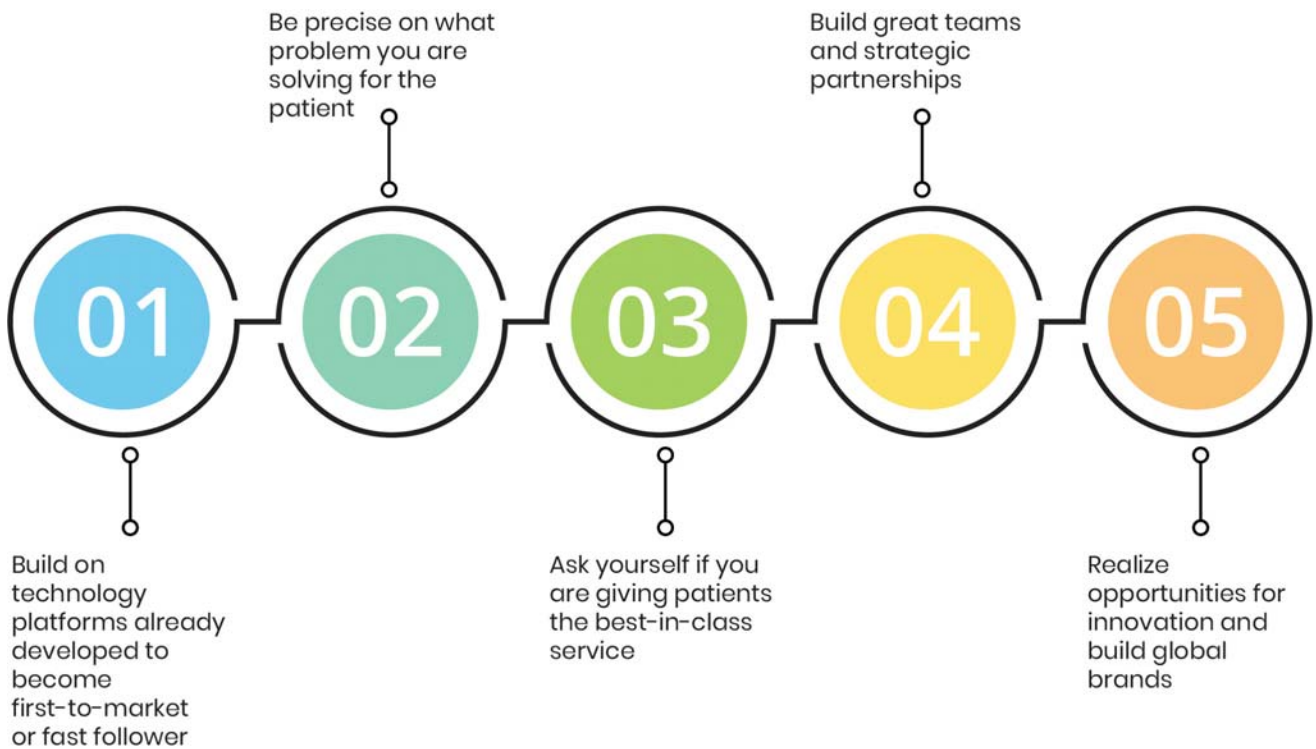
+

Preventative care
Early diagnosis of diseases enables timely treatment and fewer complications

Why now? Indian Digital Health Financing: Deals and Dollars (2013-Oct. 2017)

Be precise on what problem you are solving for the patient

Build great teams and strategic partnerships

01 **02** **03** **04** **05**

Build on technology platforms already developed to become first-to-market or fast follower

Ask yourself if you are giving patients the best-in-class service

Realize opportunities for innovation and build global brands

Digital Disruption in Health
Major Subsectors of Investment

Wearables

Telemedicine

Consumer Tools

Analytics

Hospital Admin

Link Your Entire Stroke Team With A Tap

Care Coordination

Gerald Jaideep, CEO, of MedVarsity an Apollo Hospitals company is India's first online healthcare training company. MedVarsity has more than 20,000 hours of online training materials available at more than 50 clinical locations and has already trained 35,000 students. MedVarsity partners with a number of Indian healthcare companies such as Amity Online, MaxCure Hospitals, and Apollo Hospitals, as well as eCornell in the U.S., the Royal Liverpool Academy and the Royal College of General Practitioners in the U.K., the University of New South Wales in Australia, and National Tertiary Group in New Zealand. Jaideep described the power of online education to meet India's rural healthcare training needs because of its reach, cost efficiency and demonstrated high-impact learning effectiveness. He noted that curiosity is a key to learning new skills.

Dr. Srinivas Rao, CEO of Medskills is the largest and most preferred healthcare skilling partner in India with 45 centers in 25 states. Rao provided the numbers of students enrolled in skilling (40,000), upskilled (60,000), and trained (100,000) with 74% placements with more than 200 partners. Rao noted that the "supply side" challenge is the high exit rate at the graduate level, with limited skills; with an equal challenge on the "demand side" (See Charts/Sidebars). He outlined four innovative digital programs to address significant issues:
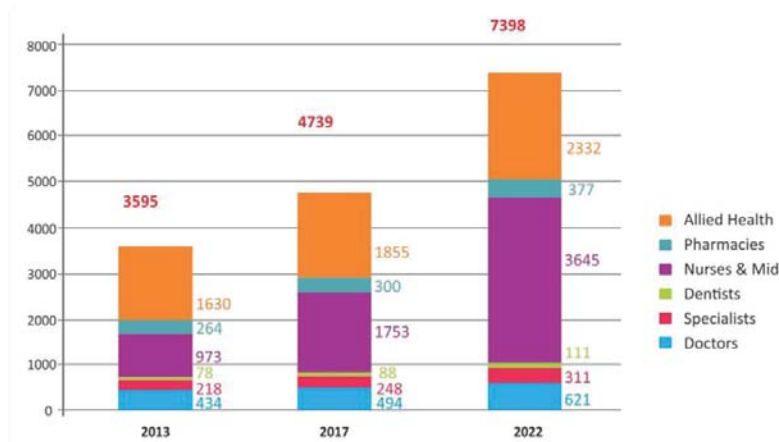
To mobilize student and improve skilling, Medskills created a digital "aspiration gauge"; to address lack of certified trainers.

Medskills also developed an online Learning Management System (LMS) in partnership with Microsoft that includes digital classrooms, remote learning, digital assessments, a ranking system and animations and simulations.

Medskills developed "Healers Ark", a networking program for alumni and video service for calls between parents and students to address high dropout rates after remote placements.

To gather data on school dropouts, in partnership with the Ministry of Rural Development, Government of India, Medskills developed a skills registry called "Kaushal Panjee". These innovative programs have won several awards.
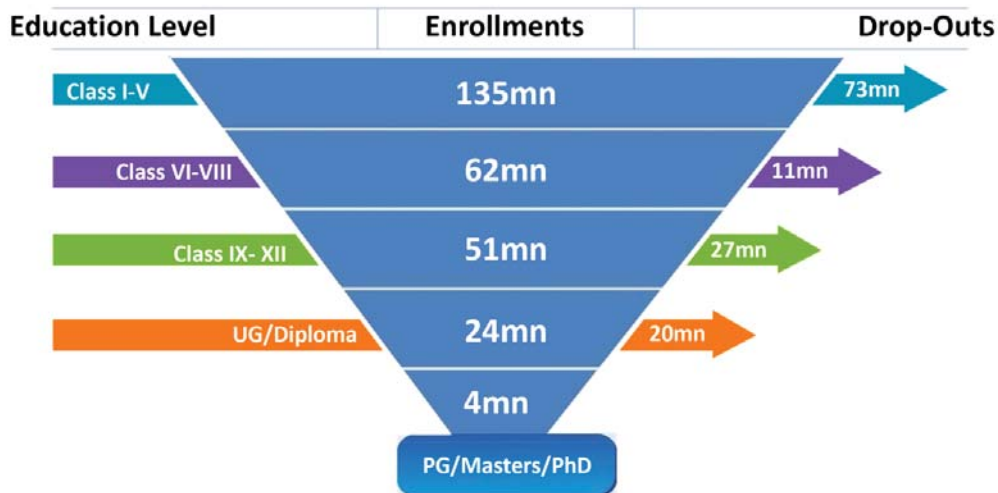
Demand side- Skill gap in Healthcare...

Apollo MedSkills
Leading the Skilling Revolution

	2013	2017	2022
Total	3595	4739	7398
Allied Health	1630	1855	2332
Pharmacies	264	300	377
Nurses & Mid	973	1753	3645
Dentists	78	88	111
Specialists	218	248	311
Doctors	434	494	621

*Source: NSDC

- Healthcare workforce expected needs to grow from 3.5 million in 2014 to 7.4 million in 2022 to meet the market demand
- Over 80% of this gap needs to be trained in Allied health and Nursing areas

Supply side- The challenge today...

Apollo MedSkills
Leading the Skilling Revolution

Education Level	Enrollments	Drop-Outs
Class I-V	135mn	73mn
Class VI-VIII	62mn	11mn
Class IX-XII	51mn	27mn
UG/Diploma	24mn	20mn
PG/Masters/PhD	4mn	

20 Million students are getting out at the Graduate Level with limited skills

Summary: Digital health initiatives offer real hope in delivery the essential programs at rural level. Such programs are critically important before the rural population can be empowered economically. Substantial resources already exist and digital technologies offer hope for more effective deployment of those resources. Digital technologies are already helping both the skilling of health professionals and the delivery of healthcare to rural populations.

SESSION #5:

DIGITAL AGRICULTURE PLOWS TO PROFITS

Speakers (from left): Mr. Venkata Krishna Velugubanti, Global Practice Leader, ITC Infotech India; Prof. Madaswamy Moni, Chief Advisor (Information Technology) Department of Agriculture, Government of India; Dr. S. Venku Reddy, Founder President & Executive Director, Participatory Rural Development Initiatives Society; Dr. Richard Oliver, Chair, SKILLS 2017; Dr. V.V.Sadamate, Agriculture Convergence Expert & Former Advisor Agriculture in Planning Commission; Dr. Suhas P. Wani, Research Program Director – Asia & Director ICRISAT Development Center; Dr Shaik N Meera, Principal Scientist, Indian Institute of Rice Research; and Dr. Sanjeev Panwar, Senior Scientist - Technical Coordination Division, Indian Council of Agricultural Research (ICAR).

Because agriculture is 60% of India's economy and employs 64 % of the entire workforce, the Digital Agriculture session included significant audience interaction, especially from individuals actively involved in agriculture. The session review was written by Dr. Shaik N. Meera.

The Digital Agriculture session was Chaired by Dr. V.V Sadamate, Dr. Venku Reddy and Mr. Sanjay Panwar served as Co-Chairs. Eminent Speakers included Prof. M. Moni, former Director General (National Informatics Centre), Dr. Suhas P. Wani, Director (ICRISAT), Dr. Shaik N. Meera, Principal Scientist (ICAR), Mr. Venkata Krishna Velugubanti, Global Practice Leader (ITC InfoTech). The speakers shared their experiences with Digital Agriculture strategies that could be deployed in India. Mr. Sai Krishna Dandamudi, VARI and Ms. Siddhika V Meher, Fisheries Economics, Extension and Statistics Division, ICAR-CIFE, Mumbai also presented. The deliberations resulted in the following recommendations:

1. Digitalize the farming system is a step to achieve sustainable agricultural productivity with minimize farmers' distress.

2. Use ICT and e-Governance strategically in farming system life cycle to sustainably boost farmers' incomes.

3. Urgently consider seven disciplines in the farming sector:

   - Employ digital technology and innovation in agriculture: Digital India, Make in India, Skill India and StartUp India Programmes for Transformational Reforms in Agricultural Sector (SMART Farming);

   - Digitalize the Agro-Met Advisories and Agricultural Risk Management Solution;

   - Digitalize the Agricultural Resources Information System and Micro-Level Planning to achieve SMART VILLAGE and SMART FARMING;

   - Digitalize the Value Chain for approximately 400 agricultural commodities;

   - Provide digitalized access for farmers to inputs, technology, knowledge, skill, agricultural finance, credit, marketing and agribusiness management;

   - Digitalize an Integrated Land and Water Management System – Per Drop More Crop;

   - Digitalize a Farm Health Management System to reduce farmers' losses.

4. The challenge is how to usher in Agriculture 4.0 by 2022 which is required to bridge the increasing gap in human resources for Digitalization of Agriculture, through Digital India, Make In India, StartUp India and StandUp India Programmes. Possible measures include:

   - Establish agricultural schools, agricultural polytechnics (Agriculture Polytechnic, Horticulture Polytechnic, Fisheries Polytechnic, Livestock Polytechnic etc.) and agricultural ITIs at the block level;

   - Produce agricultural informatics professionals for youths of rural India through M. Tech Courses (after B.Sc. in Agricultural Sciences and Allied Subjects and M.Sc. in Non-Agricultural Science Disciplines / B. Tech in Agricultural Informatics

Courses (after +2 courses in Biology/ Mathematics, Physics, chemistry etc.), as established at Shobhit University Meerut;

- Prepare approximately 100,000 agricultural students to be ready by 2022, through agricultural informatics, to undertake S&T based agricultural development and rejuvenate and usher in agricultural dynamism in the country.

5. Develop a series of Agricultural Value Chains, across the production systems along with a road map to integrate digital strategies with Agricultural Value Chains. Digital technologies can play a major role in this development. In Canada, there are approximately 14 operational Agricultural Value Chains.*

6. Focus on agriculture and allied sectors and tap identified sources of growth to double farmers' incomes, as envisaged by Honorable Prime Minister of India, digital agriculture strategies. Current efforts focus mainly on enhancing production and productivity. It is time to pilot a few projects to link farmers to markets to realize enhanced incomes. The successful VARI initiative and MOWEN (Mobile platform for Online seafood bazaar by FisherWomEN) may be integrated with such digital marketing strategies;

7. Integrate existing mobile and Web marketing platforms with e-National Agricultural Markets (e-NAM); a project proposal may be submitted to the Government of India / Government of Telangana '/Government of Andhra Pradesh, to improve market access of small and marginal farmers. This will provide evidences of how to double farmers' incomes through digital market interventions. A cloud computing-based smart application linking farmers in rural India to traders across may be promoted;

8. Adopt Genomics, Robotics, Informatics and Nanotechnology (GRIN) as being discussed as the core component of "Future Agriculture". India needs to take note of and take advantage of this development;

9. Harness soil and crop sensors, telematics, hyper-precision, bio-informatics, geospatial technologies etc., for various categories of farmers, especially small holder farms and their aggregates;

10. Initiate a pilot project to synergize the efforts of stakeholders in a cluster of villages in an identified block/district; value addition[3] and scaling up of the ICRISAT Development Model and e-Choupal of ITC will help;

11. Submit a project proposal to integrate existing mobile apps and their appropriate location-specific application to maximize the benefits for farmers. This should be preceded by networking digital models that are relevant to a selected target state/region. Mobile applications that link production, marketing, insurance, credit etc., are essential. There is a need to link sub-sectoral schemes of central/state governments.

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[3] Technically, the term !value chain! refers to a set of activities within an organization. A more accurate descriptor would be 'value system' which refers to a set of activities across many organizations from production to consumption.

12. Explore skill development in digital agriculture and Agricultural Informatics Degree / Vocational Courses / Diploma / Certificate. Telangana Academy for Skill and Knowledge (TASK) and Agricultural Skill Development Corporation of GOI may be approached for programme funding. There has been no coordination between IT/ITeS Skill Development Council and Agricultural Skill Development Council for "IT in Agriculture" skill development;

13. Identify a central agency to examine and certify the applications (apps) used for digital agriculture. There are several private/public sector agencies developing digital crop apps for different crops. However, there is a significant amount of duplication of efforts and the reliability of contents is questionable;

14. Identify and encourage business opportunities for private organizations to design, develop and implement a series of digital projects. A brainstorming/Hackathon may throw open several opportunities for REEDS / LSLSI and many organizations to work together;

15. Develop a proof of concept (POC) in collaboration with various stakeholder organizations. One area that has potential funding for digital interventions is climate smart farming. Digital strategies need to be developed with knowledge, production, ecological and financial dimensions linked to the socio-economic profiles of the farming communities;

16. Explore the Crop Colonies Project of the Government of Telangana State use of Genomics, remote sensing and Informatics. If proven to be successful, this could be scaled up to other states as well; and

17. Integrate different knowledge bases (knowledge graph) that exist as silos in various Centres of Excellence (COEs). The integrated knowledge, through analytical technologies in Agriculture, can be made easily available to the end users in their own languages.

SIDEBAR: DIGITAL AGRICULTURE: PLOWS TO PROFITS
BY MR. SAI KRISHNA DANDAMUDI, VARI, PADMAVATHI ARGO SERVICES

- VARI Premise : better information for farmers improves incomes (by 15 - 20%); better products to consumers

- Rice for Diabetics: Consumer challenge: India #3 in world for diabetes; RNR 15048 rice reduced sugar

- More than just production; addresses market information (prices discovery, price transparency & price transmission) & transaction platform

- Addresses: medium scale farmers: 44% of Indian total; 70% of owned cultivate land; 55%of Indian food grains.

- Mobile application for online sale of fish and fishery products (cooked and ready to eat form).

- Utility: To compare in case of price, dish specification, fast delivery and customizing the fish product preparation according to one's requirement and also placing an order for value added fish product.

- Authentic style and recipes.

- The cleanliness and hygiene is maintained through providing training and certification.

- An arbitrary amount on each month sale of a woman will be saved in the form of bank deposit.

- Cashless money transaction- goal towards cashless and digital India.

- This additional benefit and social uplifting will attract people to use of this application.

"Digital India will leverage a mix existing and emerging technologies for effective and inexpensive ICT penetration in agricultural development ... to be the global leader in innovation solutions for agricultural production and innovation."

- Madaswamy Moni
Chief Advisor (IT), Department of Agriculture,
Cooperation & Farmers Welfare, Government of India

Summary: No single or simple solutions will transform the 65 percent of the Indian economy represented by agriculture. The session presented numerous recommendations and case studies across every part of India's agriculture – from production and people to marketing and consumption.

INFORMATION TECHNLOGY +

INDIA TODAY = INDIA TOMORROW [IT+IT=IT]

Mr. J Satyanarayana, Chairman of UIDAI, Aadhaar and e-governance advisor to the Government of Andhra Pradesh, began his presentation by noting that it is exciting time for these roles. For example, 20 billion e-government electronic transactions have occurred since 1st January this year or about 2 billion a month (at the time of conference). Visit the electronic Transaction aggregation & analysis layer (etaal.gov.in) and see the magic it produces with real time data on digital transactions from Kashmir to Kanyakumari and from the North East to Gujarat. In terms of this conference, it is important to note that agricultural services tops the charts.

To understand the role of government in provisioning Digital India, both the volume of transactions and the variety of applications are important considerations. Scaling services across a country with 1.25 Billion people with diverse geographies, climatic conditions and economic strata is the first big challenge. Some ideas might sound good in theory but not meet the challenge of implementing and designing a digital service architecting for India.

The second challenge is variety of services. In Andhra Pradesh (AP) we have attempted to build a systematic scalable approach in such a way to offer an Internet Dashboard of whatever is happening in real time in the state, from which you can see more than 50 services. (core. ap.gov.in).

Digital India: The goal of Digital India (with nine pillars) is to transform India to a digital empowered society. So how do you empower the people of this country in order to create a knowledge economy? At a very high level that vision includes a lot of activities under the banner of Information Technology + India Today = India Tomorrow, or IT+IT=IT. The target groups include: farmers, students, women, children, landless, and the informal sector. The Inclusion Strategy is to build an enabling infrastructure and enabling instruments to provide access, engagement, training, content infrastructure and tools, content, and support.

Achieving Digital India requires four critical building blocks:

DIGITAL IDENTITY: AADHAAR

Aadhaar was created in 2009 to empower the residents of India with a 12-digit Unique Identity and digital platform to authenticate various transactions anytime anywhere. Today there is 98% enrolment with an ID (with biometrics, demographics or One True Pairing) so individuals have the authority and power to access their own data but that of no-one else. One of our key responsibilities is security and privacy of data.

Aadhaar is used for a variety of purposes such as ration verification, pension authenticating, rural wages, and scholarships for students, seed and fertiliser distribution, deed registration, and land records. Two examples of Aadhaar are in the sidebar.

Aadhaar provides one-second verification even on a 2G connection. Some four-crore people (40 million, or more than one tenth of the working population) use Aadhaar every day, and it is expected to increase even further. Aadhar data is open to the public at uidai.net.gov.in.

We manage Aadhaar with about 1800 employees, 350 in house and rest outsourced. We are present in ten locations across the country including two large data centres (with 7,000+ people) in Karnataka and Haryana.

DIGITAL PAYMENTS: UPI, INDIA STACK

For repeatable automatable payments, we use the Unified Payment Interface (UPI) that verifies payments in a variety of areas such as healthcare, education, agriculture, rural and urban development.

The India Stack, including Aadhaar (digital identity), E Sign (authentication), Digi Locker (e-Documents) and UPI (e-Payments), is a open source technology stack, freely available for download, for use for by any individual for their own applications.

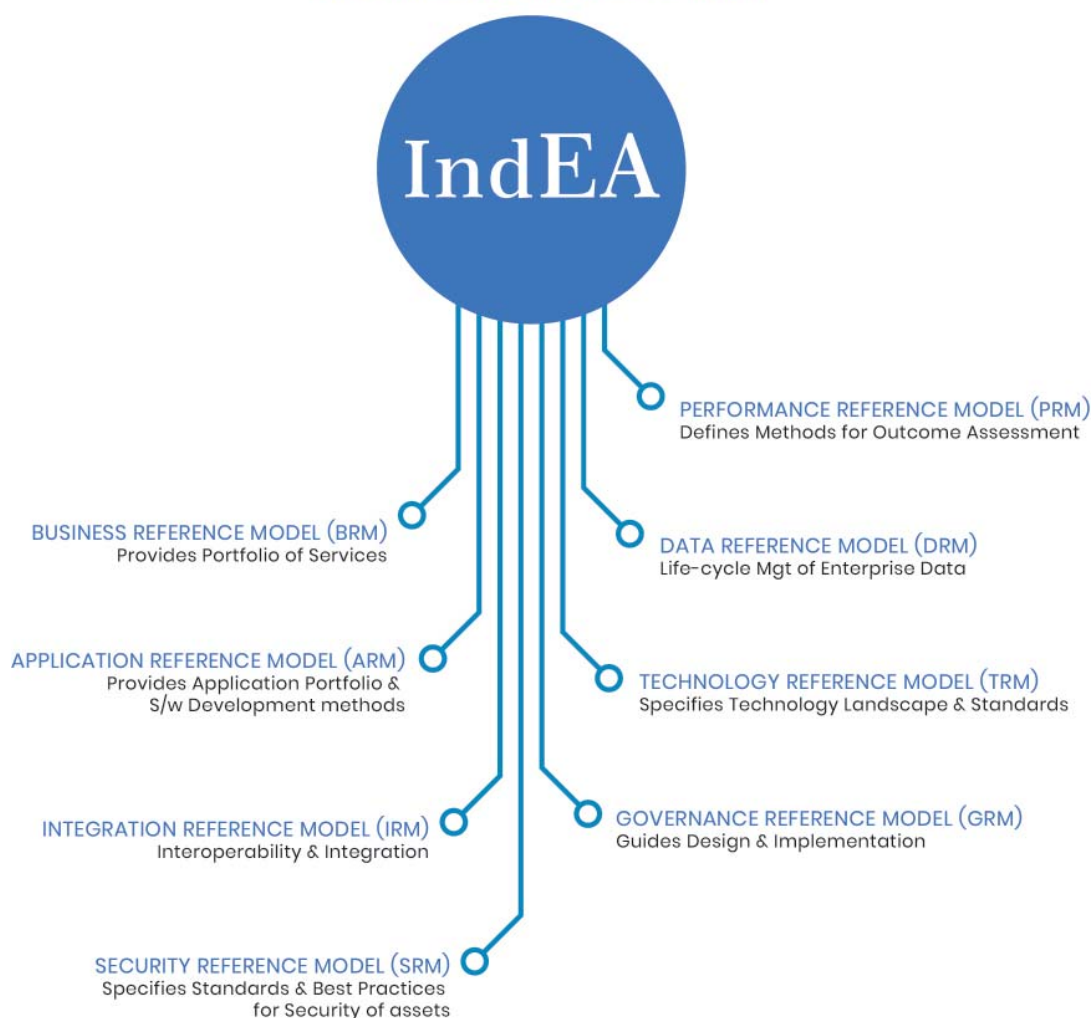| SIDEBAR: WEIGHMENT & LAND RECORDS	
• A typical transaction in a fair price shop happens in less than one to one and half minutes including the weighment, so a transaction isn't allowed unless it is correct. The authentication portion typically happens in less than 1 second out of the whole thing. Similarly, the distribution of seed and fertiliser to the farmer is used but these two were not so universal yet..	• Several states are trying out Aadhaar for registration of deeds if there is no duplicate there is no impersonation of selling any property. In Andhra Pradesh, on a pilot basis, we have a project called BhuSeva that assigns every parcel of land and property (including apartments and the like) with a Unique Identity. I am very optimistic that it will be very successful and impact rural in India by providing assurance of legal land transactions.

DIGITAL SERVICES: INDEA

Today with virtualisation of so much in the 'cloud,' there are no barriers in the digital world unless we create them. So, we asked the question: Why can't you virtualise government? And the answer was IndEA, the India Enterprise Architecture. It's a set of eight reference models that guide design of a digital service and manage it over its life cycle (see chart). It will rule all the e-governance efforts in the country in the future.

"Everyone gets smarter because of this technology… and the empowerment of people is the secret to technological progress."

- Eric Schmidt
Executive Chairman,
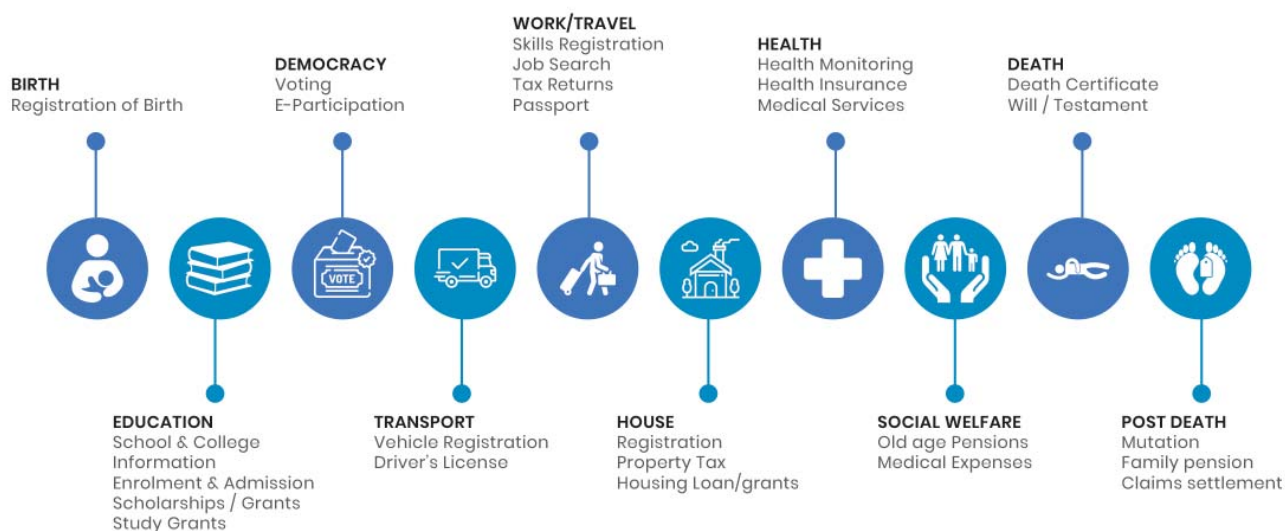Google, USA

THE 8 REFERENCE MODELS OF INDEA

IndEA

PERFORMANCE REFERENCE MODEL (PRM)
Defines Methods for Outcome Assessment

BUSINESS REFERENCE MODEL (BRM)
Provides Portfolio of Services

DATA REFERENCE MODEL (DRM)
Life-cycle Mgt of Enterprise Data

APPLICATION REFERENCE MODEL (ARM)
Provides Application Portfolio &
S/w Development methods

TECHNOLOGY REFERENCE MODEL (TRM)
Specifies Technology Landscape & Standards

INTEGRATION REFERENCE MODEL (IRM)
Interoperability & Integration

GOVERNANCE REFERENCE MODEL (GRM)
Guides Design & Implementation

SECURITY REFERENCE MODEL (SRM)
Specifies Standards & Best Practices
for Security of assets

E-PRAGATI:

We are creating Digital India in a systematic, citizen centric way, with one government platform to address sustainable development goals. This 'big vision' includes visualising the life cycle and event driven needs or touch points of individuals, industry and society interacting the government (see chart).

For example: In AP, 6.5 million farmers are provided with 74 digital services, including extension services, input management, loans and insurance, farm management, storage and marketing and disaster management. Similarly, 6.5 million students are provided with 41 e-services and 3,000 e-classrooms, including enrolment, education, institution management, benefits, examination, and skill development.

"We want to have one mission and target: Take the nation forward digitally and economically."

– PM Shri Narendra Modi

LIFE CYCLE APPROACH

BIRTH
Registration of Birth

DEMOCRACY
Voting
E-Participation

WORK/TRAVEL
Skills Registration
Job Search
Tax Returns
Passport

HEALTH
Health Monitoring
Health Insurance
Medical Services

DEATH
Death Certificate
Will / Testament

EDUCATION
School & College
Information
Enrolment & Admission
Scholarships / Grants
Study Grants

TRANSPORT
Vehicle Registration
Driver's License

HOUSE
Registration
Property Tax
Housing Loan/grants

SOCIAL WELFARE
Old age Pensions
Medical Expenses

POST DEATH
Mutation
Family pension
Claims settlement

CRITICAL SUCCESS FACTORS

We believe that to be successful, we need to do three things:

◉ Leverage the available building blocks and not reinvent the wheel.

◉ Create eco-systems with open-API-based architectures for easing development of entrepreneurial ideas.

◉ Build capabilities for innovation that are not constrained by government thinking.

- J Satyanarayana
Chairman, UIDAI

DIGITAL SOLUTIONS TO ENABLE CHANGE

Dr. G Vivekanand, Advisor - Interstate Affairs, Government of Telangana, who was a special guest at the event, commended the efforts of the organisers and the objective of the conference as timely and thoughtful. Quoting his own experience as a public representative, he noted that people in the villages are capable of understanding new technologies and in fact with the advent of Facebook, Twitter and WhatsApp, many of them are conversant with digital intitatives in several areas including farming and in relation to various other development works and schemes.

He stressed that Digital Technologies have immense potential to make a great impact on agriculture development and among the rural communities and improve their quality of life. In the case of Telangana, digital technologies and skills sets are introduced, if appropriate, in implementing several irrigation projects to facilitate irrigation of nearly one crore acres and other initiatives the government has undertaken to benefit the farmers; it would not be difficult to achieve agricultural growth rates up to 20 percent and beyond.

He called upon all the participants to work towards empowering farmers and rural communities by leveraging digital technologies. He noted that the deliberations of the conference will provide supportive digital solutions and skills to enabling the change and rural economic growth.

- Dr. G Vivekanand
Advisor – Interstate Affairs
Government of Telangana

VALEDICTORY SESSION

Speakers (from left): Mr. Ravindra Vikram M, Chairman, REEDS; Dr. Richard W Oliver, Conference Chair: Mr. YS Chowdhary, Minister of State for Ministry of Science, Technology & Earth Sciences, Government of India; Mr. Konda Vishweshwar Reddy, Member of Parliament & Member, Parliamentary Standing Committee on Health and Family Welfare; Dr. SK Hajela, Member of Conference Organizing Committee; and Dr. Ravi K Reddy, Secretary REEDS.

Speakers universally applauded the SKILLS 2017 Conference for its ambitious objectives and clear focus on the need to ensure skill development of rural Indians in the Digital India program. Speakers congratulated the conference organizers and all who attended.

Y. S. Chowdary spoke most eloquently on India's emergence as a player in deep scientific discovery. Chowdary noted that the development of skills was a vital part of the Indian Government's commitment to development to achieve a return on the country's demographic dividend. Importantly noted, the goal of doubling rural incomes by 2022 can be achieved with Digital India's impact on agricultural productivity and improved logistics, financial inclusion, and transforming education and healthcare.

Summary: This session presented high level support for the conference and for the Digital India initiative. Speakers emphasized government support for Digital India activities at the national and state level.

CONFERENCE COMMITTEES

Initiators of Skills Conference Series

- Prof. R Sadananda
- Dr. SK Hajela
- Dr. Ravi K Reddy.

Organizing Committee

- Dr. Richard W Oliver, Conference Chair
- Dr. Ravi K Reddy
- Dr. Shailendra Kumar Hajela

International Advisory Committee

- Beena Chintalapuri
- Bharat S. Sontakki
- Chandrashekara P
- Dan Coholan
- Harrikrishna A Narismulu
- Hemnath Rao H,
- Jaleel (Gary) Khan
- Jaya Indiresan
- Kushil Gunasekera
- M. N. Reddy
- Rao Kasarabada C
- Pradeep Khanna
- Sadamate V.V
- Sanjeev Nayan

- Satish Kumar Manocha
- Sastry V N
- Shaik N. Meera
- Shantha Sinha
- Shekar Babu,
- Sridhar DLV
- Srinivas Rao S
- Sujiv Nair
- Suresh Kumar, IAS (Retd)
- Venku Reddy S
- Vijay Sastry Kotamarti
- Vikram Ravindra M
- Vinod Gaddam
- Young Soo You

SPEAKERS

AMARNATH RAJA
CEO and co-founder of InApp.

ANAND SUDARSHAN
Founder & Director of Sylvant Advisors.

BOBBA VENKATADRI
General Partner Ventureast.

CARRIE OLIVER
Founder and Managing Director of the Yare Group, UK

CHOWDARY Y. S.
Hon'ble Minister of State for Ministry of Science & Technology & Earth Sciences.

DAN COHOLAN
Vice Chairman, RBC Wealth Management Royal Bank of Canada, Canada.

GERALD JAIDEEP
CEO, Medvarsity

HAJELA SK
International Telecommunication Expert.

JALEEL (GARY) KHAN
CEO,Hyderabad Conventions Visitor Bureau.

K.C.REDDY
Chairman, Rajiv Education and Employment Mission of A.P., Hyderabad, Andhra Pradesh.

MADASWAMY MONI
Chief Advisor (IT) Department of Agriculture, Cooperation & Farmers Welfare GoI.

MANAS RANJAN MOHANTY
General Manager, Reserve Bank of India, Hyderabad,India.

MOHAN REDDY BVR
Founder & Executive chairman of Cyient Ltd.

RAMESH K RAJU
Technical Writer, NXP Semiconductors.

RANJAN PATNAIK
Technology Director, South Asia & ASEAN, DuPont

RAQUEL SHROFF
Group CEO, Global Education Services, Australia.

RAVI K REDDY
Secretary, REEDS, India.

RAVI KOTA, IAS
Principal Secretary to the Government of Assam, Department of Finance Department.

RICHARD W OLIVER
Founder & Chief Executive Officer American Sentinel University Colorado, USA.

RUCHI KHEMKA
Vice President – CSR, Deutsche Bank Group In India.

SADAMATE V.V
Agriculture Convergence Expert.

SAI KRISHNA DANDAMUDI
VARI.

SAILAJA
Officer on Special Duty, Telangana Academy for Skill and Knowledge.

SANJEEV PANWAR
Indian Council of Agricultural Research (ICAR).

SATYANARAYANA J, IAS (RETD)
Chairman, Unique Identification Authority of India (UIDAI).

SHAIK N MEERA
Principal Scientist, Indian Institute of Rice Research.

SIDDHIKA V MEHAR
Fisheries Economics, Extension and Statistics Division, ICAR-CIFE.

SIVAKUMAR S
Divisional Chief Executive of Agri Business Division, ITC Ltd.

SRINIVASA RAO.P
Chief Executive Officer at Apollo Medskills Limited.

SUHAS P. WANI
Director, ICRISAT Development Center.

SURESH KUMAR
Former Principle Secretary, Department of Agriculture, Government of Maharashtra.

VENKATA KRISHNA VELUGUBANTI
Global Practice Leader, ITC Infotech.

VENKU REDDY S
Founder President, Participatory Rural Development Initiatives Society.

VIKRAM RAVINDRA M
MV Foundation, India.

VINOD G
Former Minister for Labour and Employment, Govt. of AP.

VISHWESHWAR REDDY K
Member of Parliament, Chevella Constituency, Telangana, India.

VIVEKANAND G
Advisor - Interstate Affairs, Government of Telangana.

WASNIK KP
Additional Commissioner(Extn), Department of Agriculture, Government of India.

CONFERENCE MESSAGES

भारत के उपराष्ट्रपति
VICE-PRESIDENT OF INDIA
MESSAGE

I am happy to know that SKILLS2017: Leveraging Digital India for rural empowerment, the 4th edition of Life Skills and Livelihood Skills International Conference has been held in Hyderabad on 16 - 17 November 2017.

As Prime Minister Modi articulates, Digital India Mission is an enterprise for India's transformation on a scale that is, perhaps, unmatched in human history. The future of the country's economy is heavily dependent on the success of the Digital India campaign. Technology if used right will be one of the most effective drivers of the much needed "inclusive growth" in India.

The challenges are many and may seem daunting, but it is not an impossible to achieve. Undoubtedly, there is a massive digital divide in the country based on income, education, residence and use of ICT which are correlated with economies, political and cultural power.

I am pleased to note that the main objective of the conference is to identify and debate the opportunities and challenges associated with leveraging Digital India especially in the key strategic areas such as: infrastructure provisioning; financial inclusion; agriculture; education and healthcare for accelerating rural incomes and sustainable rural economies.

I hope the diverse group of stakeholders gathering at SKILLS2017 Conference will have purposeful deliberations on the best means to identify the challenges and create the disruptive and innovative solutions necessary to leverage Digital India for rural empowerment.

My good wishes to the conference attendees on this occasion and my compliments to the organizers for their efforts to make the vision of 'Digitally empowered India' a reality.

(M. Venkaiah Naidu)

New Delhi
24th November, 2017.

E.S.L. Narasimhan

GOVERNOR
ANDHRA PRADESH AND TELANGANA

RAJ BHAVAN
HYDERABAD-500 041

15.11.2017

MESSAGE

I am happy to learn that the 4th International Conference **'SKILLS2017'** on 'Life Skills & Livelihood Skills - Leveraging Digital India for Rural Empowerment' is being organised on 16-17 November 2017 at Dr. MCR HRD Institute of Telangana, Hyderabad, in association with Telangana Academy of Skills and Knowledge (TASK), Government of Telangana.

Digital Technologies is a force multiplier for the entire services economy that plays a game changing role and has potential for many new opportunities especially for the rural communities and their empowerment. The theme of the International conference is very apt and helpful in realising the dream of a 'Digitally empowered India', and help transform rural agricultural economics.

I hope the conference will focus on the vision of Digital India, where every Indian is digitally empowered and every information is digitally available.

I wish the 4th International Conference **'SKILLS2017'**, all success.

ESL ~~~
15/11/1)

E.S.L. Narasimhan

अनंतकुमार हेगड़े
ANANTKUMAR HEGDE
ಅನಂತಕುಮಾರ ಹೆಗಡೆ
कौशल विकास और उद्यमशीलता
राज्य मंत्री, भारत सरकार
Minister of State
Skill Development & Entrepreneurship
Government of India

सत्यमेव जयते

स्वच्छ भारत
एक कदम स्वच्छता की ओर

MESSAGE

It gives me immense pleasure to know that REEDS and LSLSI, not-for-profit organisations working in the area of rural empowerment, in collaboration with Telangana Academy of Skills and Knowledge, Government of Telangana are organising **"SKILLS2017"** International Conference with the theme **"Leveraging Digital India for Rural Empowerment"**.

India has the potential to rapidly transform itself from a developing nation to world economic social and cultural leadership by **"Leapfrogging"** traditional technologies and embracing the Digital India Mission.

I am happy to note that the conference is focussed on the Digital India mission launched by **Hon'ble Prime Minister Shri. Narendra Modi Ji** to digitally empower the country and help transform rural agricultural economies. I am sure that **SKILLS2017** conference will explore and debate the way forward in provisioning last mile infrastructure and localised services and applications in rural areas and the critical need for focus on the issues for skill training and development for rural sector.

I would like to extend my best wishes to the organizers and to the participants for a productive and successful event.

Dated : 09 Nov 2017

(Anantkumar Hegde)

Skill India
कौशल भारत-कुशल भारत

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नीता वर्मा
महानिदेशक

Neeta Verma
Director General

MESSAGE

I am pleased to know that the Rural Economic and Educational Development Society (REEDS) in association with Life Skill and Livelihood Skills International (LSLSI) organizing 4th SKILLS-2017 International Conference during 16th-17th November, 2017   with the theme "Leveraging Digital India for Rural Empowerment".

The digital economy can be termed as the economic activity that results from billions of everyday online connections among citizens, businesses, devices, data, and processes. In addition to its economic impact, digitalization can have cascading and transformative impacts on environment, education, health, and governance. India is emerging as a potentially strong digital economy with 462 million internet users and with rich demographic dividend.

The Government of India in its Union Budget of 2017, gives a major push to digital economy by setting a target of 2,500 crore digital transactions for this financial year through digital payment infrastructure which needs to strengthened. Efforts are on in formulating policies & schemes to make India a $1 trillion digital economy by the year 2022 under the ambit of 'Digital India', the flagship program of the Government of India. Digital payments and projects such as Make-In-India, Start-up India, 100 Smart Cities, etc. are identified as the key drivers of the digital economy. While India takes strides towards digital economy, high speed network connectivity and cyber security emerge as the key concern areas of the government.

Another key focus area of the government is digital education & skill development of youth to make India a digitally empowered society. It is expected that digital economy shall lead to generation of 30 million employment opportunities in India by 2024-25.

I extend my best wishes to the organizing members and participants for taking part in the prestigious International Conference, on a theme which is one of the focus areas of the Government of India today. I hope this conference will bring awareness to participants on the steps the Government is taking while marching towards digital economy.

(Neeta Verma)
Director General

CANADA INDIA
FOUNDAT ON

Canada India Foundation (HST Number: 82297 9522 RT0001)
Address: 2939 Portland Drive, Suite # 300, Oakville, ON L6H 5S4
Tel: 416-827-5189 / E-mail: viput@canadaindiafoundation.com / Web: www.canadaindiafoundation.com

Dr. Richard W. Oliver
Conference Chair
Skills 2017, Hyderabad, India
November 13, 2017

Dear Dr. Oliver,

Canada India Foundation, the premier Indo-Canadian Public Policy Organization, would like to congratulate and wish you for this year's Skills 2017 Conference.

The 4th International Conference on Life Skills and Livelihood Skills — leveraging Digital India for Rural Empowerment, taking place in Hyderabad on November 16-17 is very timely and extremely useful because of the theme and its relevance in India of today.

Digital India, one of the flagship schemes of Government of India, is indeed, a potent opportunity to transform India by empowering almost a billion rural Indians with advanced skills and latest digital tools, enabling them to leapfrog into the digital age.

The Sessions (Digital Infrastructure, Financial Inclusion or Illusion, Digital Education, Digital RX for Rural Health, Digital Agriculture) are the need of the hour.

CIF is proud to have one of its own, Mr. Vijay Sastry Kotamarti (member of the CIF Board of Governors) contributing to this great initiative as member of your international advisory committee.

We wish you great success, as your success will be the success of a billion rural Indians.

Kindly keep up the good work.

Sincerely,

VYj^r

(Vipul Jani)
Executive Director

K. Vijayanand, IAS
Principal Secretary to Government

Information Technology, Electronics & Communications Department
Government of Andhra Pradesh
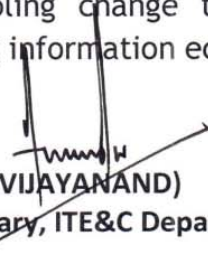
Dt: 14th November 2017

MESSAGE

It is a pleasure to know that SKILLS2017 International Conference with the theme 'Leveraging Digital India for Rural Empowerment', focused on the Digital India mission to digitally empower the country and help transform rural agricultural economies on 16-17 November 2017 at Hyderabad.

Digital India Programme symbolizes the Government of India's vision for connecting and empowering nearly one-fifth of world population by leveraging technology for quality education, health care, farming, financial inclusion and empowering citizens.

Digital India Mission has created immense opportunities to be harvested with greater possibility and ease of reaching the hitherto underserved or excluded portions of the society such as women, rural population and other marginalized communities.

What we need now are interventions across sectors for India to bridge the persisting 'digital divide' besides the concern for 'digital exclusion' of people living in rural areas. Now it's time to deliver to make India 'digitally empowered'.

I wish SKILLS2017 all the success and hope the deliberations will propose supportive digital solutions to enabling change to ensure empowerment inclusive growth in an expanding information economy.

(K. VIJAYANAND)
Principal Secretary, ITE&C Department

Andhra Pradesh - The Sunrise State - The most preferred IT destination

It's a well known fact that there's a great divide between rural and urban India in terms of livelihood opportunities or quality of life. Solutions to empower the rural producers or consumers have had a limited success because they are fragmented in terms of their individual size, are heterogeneous in their profiles, and are dispersed geographically, making access difficult and expensive. Consequently, the divide kept widening.

For the first time, the developments in Digital Technologies over the recent past offer hope to bridge this divide. It is now conceivable to offer personalised solutions in real time to millions of people and empower them. Rural Indians can now access input or output markets or financial services as well as citizen services without the conventional limitations.

In this backdrop, this international conference on the theme, "Life Skills and Livelihood Skills - Rural Empowerment for a Digital India" is very timely and will surely advance the cause. I wish the conference all success.

S. Sivakumar,
Group Head - Agri & IT Businesses,
ITC Limited.
Architect, ITC e-Choupal.

Namaskaram and Greetings

I greet you warmly from the Southern tip of Africa.

Having been a keen supporter, attendee and speaker at the afore-going 2010, 2013 and 2015 conference, I regret not being able to be present amongst all of you at the Skills 2017 conference.

I am having withdrawal symptoms as I really looked forward to my regular Hyderabad sojourn ; to savour the sights and sounds of Telegana and reunite with old friends.

I had made travel arrangements well in advance – so hoping to be amongst all of you.

I am glad to be part of the Skills cohort and build strong friendships with various attendees – both internal to India as well as Australia, Korea, Sri Lanka, Singapore, the SA and Canada.

It is my fervent wish – working in tandem with you – to bring the next conference to Africa.

Good wishes to all the delegates and I trust that the deliberations will be fruitful.

Harrikrishna A Narismulu
Hire Intelligence - Smart Networks
Hillary, Durban, South Africa, 4024

Dr. Ajay Kumar, IAS
Additional Secretary,
Ministry of Electronics and Information Technology,
Government of India.

It is a pleasure to know that SKILLS2017 International Conference with the theme 'Leveraging Digital India for Rural Empowerment', focused on the Digital India mission to digitally empower the country and help transform rural agricultural economies on 16-17 November 2017 at Hyderabad.

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What we need now are interventions across sectors for India to bridge the persisting 'digital divide' besides the concern for 'digital exclusion' of people living in rural areas. Now it's time to deliver to make India 'digitally empowered'.

I wish SKILLS2017 all the success and hope the deliberations will propose supportive digital solutions to enabling change to ensure empowerment inclusive growth in an expanding information economy.

From its very inception, the Foundation of Goodness has understood the value of Digital Information Technology in the rural development process without which human advancement is hindered unlike in the privileged background.

In what is rapidly being described as a 'Digital Age' it is important to bridge the gap between the rural and urban community when it comes to this subject, to ensure an equal opportunity for all to make better progress, understanding the enormous potential in the rural sector which is lacking in opportunities, thus Digital Empowerment can fast track the growth even in the remotest of villages.

Conferences such as this brings the best recommendations, and if we do not act in a timely manner to translate these ideas in to action, we have not put in to good use what we have learnt for the good of others..

 - Kushil Gunasekera
Founder, Foundation of Goodness,
Srilanka

Internet always had a promise to empower disadvantaged. However, the promise has not been realised so far partly due to non-availability of high bit-rate connectivity and non-availability of access devices, affordable in rural areas. With the emergence of 4G, with costs of data-connectivity tumbling down and wide availability and affordability of smart-phones, the infrastructure issues appear to things of the past. It is time that all efforts are made to ensure Internet does full its promise of empowering Rural India, especially the low-income people. I hope the conference takes the steps in that direction. Wishing it the very best.

- Ashok Jhunjhunwala
Professor IIT Madras.

Ontario

DIPIKA DAMERLA, MPP
Mississauga East – Cooksville

11/10/2017

Re : SKILLS2017 International Conference

I am delighted to extend warm greetings to the participants **of SKILLS2017 International Conference**. I commend your work to develop skill levels, promote sustainable economies, and improve the quality of life for those living in rural India.

Conferences like **SKILLS2017** present a valuable platform for idea development and collaborative discussion from individuals and groups at the forefront of rural development efforts in India and around the world.

The theme of this year's conference, **"Leveraging Digital India for Rural Empowerment"**, is timely and thoughtful. I am hopeful that conferences like these will be helpful in bridging the rural-urban divide.

I wish you a successful and insightful conference.

Thank you,

Dipika Damerla
Member of Provincial Parliament
Ontario, CANADA

CONFERENCE SPONSORS

The organizers of SKILLS 2017 thank the following organizations and individuals for their sponsorship support..

SPONSORS

EXHIBITORS

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CONFERENCE MEDIA REPORT

The Conference drew a lot of interest from the media. Preconference events; deliberations by the participants on the path breaking vision of Digital India's potential to create a transformational change in rural India received the most coverage. Conference coverage included more than 100 print and electronic media reports. We are grateful to the Media and thankful to our Media Managers..

Digital empowerment stressed for rural India

Our Bureau

Jubilee Hills: The fourth international conference on life skills and livelihood 'SKILLS 2017' was inaugurated by Principal IT Secretary Jayesh Ranjan here on Thursday.

Ravindra Vikram, Chairman, REEDS Dr Ravi K Reddy, Secretary, Richard W Oliver CEO of American Sentinel University, and Dan Coholan, Vice-Chairman, RBC Wealth Management (Royal Bank), Toronto were present.

The series is aimed at leveraging the digital India programme for rural empowerment. Thematic sessions on digital infrastructure, education, prescription for rural health, digital agriculture, etc were discussed.

Speaking on the occasion Dr Oliver said, "This conference features exceptional speakers with diverse expertise from India and around the world, but all concerned with the Digital India mission and the critical need for focus on the rural issues for skill training and development for that sector. India has the opportunity for global social, cultural, political and economic leadership, but it must empower its rural poor to achieve this. India will not achieve its leadership position unless it makes Digital India a reality for all Indians.

"Digital India is the biggest transformation initiative in world history. It portends a "big bang" for the world economy and if done correctly, it will thrust India to the central councils of the world. But it won't happen unless rural India is an integral part of the transformation," he said.

Dr Reddy added, "The objective of this conference is to identify and debate the opportunities and challenges associated with leveraging 'Digital India Programme' for creating life and livelihood skills that could facilitate rural income. The conference aims to propose initiatives for central, state and local government policies and programs in promoting and getting acceptability for digitisation and leverage it in order to achieve overall economic growth. The program further targets to engage NGOs, social and business entrepreneurs, organisations to create suitable projects, commercial models, products, programmes and services to accelerate Digital India for sustainable rural economies."

"There is a need that we understand the issues faced by rural India and identify key areas were Digital India can play a pivotal role in accelerating the growth in rural areas by making them self-reliant," he said.

International meet on digital literacy

Two-day workshop in Hyderabad from November 16

SPECIAL CORRESPONDENT
HYDERABAD

A two day conference – SKILLS-2017 – which will chalk out ideas to create awareness about digital literacy in rural India will kick start in the city starting November 16. Delegates from five countries, including the USA, Canada, South Africa and Japan, are expected to participate in the conference.

The event is being jointly organised by Life Skills and Livelihood Skills Inernational (LSLSI) and Rural Economic and Educational Development Society (REEDS). Telangana Academy for Skills and Knowledge will support the conference.

The conference is expected to generate working plans to get digital intervention in agriculture, education and rural health. "The conference attempts to popularise digital applications which can be used for skill development. We are also planning to strengthen cooperative societies for rural development," secretary of REEDS Ravi. K. Reddy said.

Former minister for labour and employment in undivided Andhra Pradesh G. Vinod said: "Digital literacy will have to help 70 % of the population who are from poor and weaker sections. The conference will try to find sustainable solutions for the problem."

Solutions which emerge out of the discussions at the programme will be used to make digital India simpler and easy to use, the organisers said.

Students and social workers who are interested to attend the event can register for the same on SKILLS 2017 website.

Caption: Former minister G. Vinod and REEDS secretary Ravi K Reddy with logo of SKILLS 2017 in the city on Wednesday. • K.V.S. GIRI

డిజిటల్ ఇండియాకు అందరూ సహకరించాలి

● 'స్కిల్స్ - 2017' సదస్సులో వక్తలు

బంజారాహిల్స్, న్యూస్‌టుడే: డిజిటల్ ఇండియా సాకారంలో ప్రజలు సహకరించాలని కేంద్రమంత్రి సుజనాచౌదరి పిలుపున చ్చారు. తెలంగాణ ఆకాడమీ ఫర్ స్కిల్ అండ్ నాలెడ్జ్(టాస్క్) సహకారంలో రూరల్ ఎకనామిక్ అండ్ ఎడ్యుకేషన్ డెవలప్‌మెంట్ సొసైటీ(రీడ్స్) నిర్వహిస్తున్న స్కిల్స్-2017 అంతర్జాతీయ సదస్సు శుక్రవారంతో ముగిసింది. గ్రామీణ సాధికారతకు డిజిటల్ఇం

డియా అంతరంపై సదస్సు నిర్వహించారు. సుజనాచౌదరి, ఎంపీ కొండా విశ్వేశ్వరరెడ్డి, అమెరికన్ సెంటినెల్ యూనివర్సిటీ వ్యవస్థాపకుడు, సీఈవో రిచర్డ్‌ఓలివర్, రీడ్స్ ఛైర్మన్ రవీంద్రవిక్రమ్, రీడ్స్ కార్యదర్శి సదస్సులో ఛైర్మన్ రవి కే రెడ్డి పాల్గొన్నారు. వక్తలు మాట్లాడుతూ..యువత ఆధికంగా ఇంజినీరింగ్, వైద్యవిద్యపైనే ఆసక్తి చూపుతున్నారని, డిజిటలైజేషన్‌తో మిగతారంగాల్లో అవకాశాలు పెరిగాయన్నారు. అందుకు తగ్గ రీతిలో నైప ణ్యాలను మెరుగుపర్చుకోవాలని సూచించారు.

గ్రామీణుల జీవన ప్రమాణాలు పెంపుదలే లక్ష్యం

● 16న అంతర్జాతీయ సదస్సు

హైదరాబాద్, ఆంధ్రజ్యోతి: గ్రామీణ ప్రజల జీవన ప్రమాణాల పెంపుదలే లక్ష్యంగా కృషి చేయాలని మాజీ మంత్రి జి.వినోద్ అన్నారు. బుధవారం రూరల్ ఎకనామిక్ ఎడ్యుకేషన్ డెవలప్‌మెంట్ సౌస్టీ (రీడ్స్) స్కిల్స్-2017 కార్యక్రమంపై ఏర్పాటు చేసిన మీడియా సమావేశంలో వినోద్ ముఖ్యఅతిథిగా పాల్గొన్నారు. ఈ సందర్భంగా ఆయన స్కిల్స్-2017 లోగోను ఆవిష్కరించారు. ఈ కార్యక్రమానికి సంబంధించిన బ్రోచర్‌ను కూడా విడుదల చేశారు. గ్రామీణ ప్రాంతాల్లో ఉపాధి అవకాశాలు పెంచుతంట పాటు వారికి వృత్తి నైపుణ్యాలను పెంచుకోవటంలో తగిన శిక్షణ కూడా అవసరం అని వినోద్ పేర్కొన్నారు. రీడ్స్ కార్యదర్శి డా.కె.రవిరెడ్డి మాట్లాడుతూ గ్రామీణ సాధికారత కోసం డిజిటల్ ఇండియాపై ఆధారపడిన అవకాశాలను తెలుపుతూ స్కిల్స్-2017 పేరుతో అంతర్జాతీయ సదస్సు నిర్వహిస్తున్నామన్నారు.

హైదరాబాద్ వేదికగా ఈనెల 16న డా.మర్రి చెన్నారెడ్డి మానవ వనరుల అభివృద్ధి కేంద్రంలో ఈ సదస్సును ఏర్పాటు చేస్తున్నామన్నారు. రెండు రోజులపాటు జరిగే ఈ సదస్సును రాష్ట్ర ఐటీ పురపాలక శాఖల మంత్రి కె.టి.రామారావు ప్రారంభోత్సవం చేస్తారని వెల్లడించారు. రాష్ట్రానికి చెందిన వివిధ శాఖల అధికారులతో పాటు పలు దేశాల ప్రతినిధులు కూడా సదస్సులో పాల్గొంటారని వివరించారు. ఈ సదస్సులో గ్రామీణ సాధికారత కోసం డిజిటల్ ఇండియా పరిధిని ఉపయోగించడంలో ఎదురవుతున్న సమస్యలు, వాటిని ఎక్కువగా ప్రజలకు చేరువయ్యేలా చూసే ఆత్మీయులగా మార్గాలను ఎంపిక చేయనున్నట్లు వెళ్లారు. గ్రామీణుల జీవనాధారం, సులభతర జీవనానికి నైపుణ్యాలను సృష్టించేందుకు డిజిటల్ ఇండియా కార్యక్రమానికి సంబంధించిన అవకాశాలు, సవాళ్లను గుర్తించడంతోపాటు వాటిని చర్చిస్తామన్నారు.

'New skills needed for digitisation'

BUSINESS BUREAU
Hyderabad

> **Experts in the Skills 2017 conference called for digital skilling of not only urban but rural population as well**

Digitisation is percolating to all strata's of society and for it to become successful new set of skills are needed, said experts at the Skills 2017 conference in Hyderabad on Thursday.

Speaking at the fourth international conference on life skills and livelihood skills, Ravindra Vikram M, chairman, REEDS said, "In the face of technology we are all equal and if digitisation has to become realty then we need a new set of skills in the society. Businesses have realised that digital channels are the most effective ways to reach more people."

Experts in the conference also called for skilling of not only the urban population but also the rural people so as to make rate of adoption of technology shorter.

"If we want to empower our rural population then it is important that skilling happens at grassroot level," said Dr A Sailaja, officer on special duty, TASK. She also elaborated on the achievements of Telangana Academy of Skills and Knowledge (TASK) and its various initiatives and partnerships to provide skilling opportunities to youth.

The 4th series of Skills 2017 is aimed at leveraging the digital India programme for rural empowerment. The sessions aim at exploring the issues and challenges in extending the digital India campaign to be effective in influencing and empowering the rural population.

"The conference will explore the key issues of infrastructure investment, and skilling rural India with advanced 21st Century skills in agriculture, finance, health and education," said Vikram.

Speaking about the government initiatives Dr K P Wasnik, additional commissioner, Department of Agriculture, Cooperation and Farmers Welfare said, "Last year, we spent about Rs 3.5 crore to train 3,500 rural candidates by conducting 100 hours session. This year under the Krishi Vignan Kendra, State agriculture departments and others we have allocated Rs 17 crore for the training."

సాంకేతిక ఫలాలు అందరికీ అందాలి

స్కిల్స్-2017 సదస్సులో వక్తలు

హైదరాబాద్, నమస్తే తెలంగాణ: సాంకేతిక విజ్ఞానం ఆధారంగా గ్రామీణుల జీవితాల్లో పురోగతి సాధించేందుకు ప్రభుత్వం, ప్రైవేట్ సంస్థలు ముందుకు రావాలని పలువురు వక్తలు పిలుపునిచ్చారు. స్కిల్స్-2017 పేరుతో నిర్వహిస్తున్న నాలుగో అంతర్జాతీయ సదస్సు హైదరాబాద్‌లోని మానవ వనరుల అభివృద్ధి కేంద్రంలో గురువారం ప్రారంభమైంది. మాజీ మంత్రి జి వినోద్, రీడ్స్ సంస్థ చైర్మన్ రవీంద్ర విక్రమ్, అమెరికన్ సెంటినెల్ యూనివర్సిటీ సీఈవో రిచర్డ్ వీ ఓలివర్, రాయల్ బ్యాంక్ వైస్‌చైర్మన్ డాన్ కొహ్లన్ తదితరులు పాల్గొన్నారు. రెండురోజులపాటు జరుగుతున్న ఈ సదస్సులో గ్రామీణ ప్రాంతాల్లో మార్పులు తీసుకొచ్చే అంశాలపై ప్రధానంగా చర్చిస్తామని నిర్వాహకులు తెలిపారు.

CONFERENCE FEEDBACK

We are thankful for everyone who was a part of SKILLS 2017 International Conference all played a role in making it a successful and meaningful event. Attendees and speakers alike have written in to share their positive experience of the conference. Below are a few of their comments.

- Hats off to your stewardship and immaculate orchestration of the efforts of about a year culminating in an astoundingly successful SKILLS 2017. – DR BHARAT S. SONTAKKI, Head, Extension Systems Management Division at the ICAR–NAARM.

- Hearty congratulations on the success of the event. – PROF. HEMNATH RAO H, Senior Professor & Dean, Development Management Institute, Patna.

- The Inaugural Programme had the hall full. My great appreciation for you and the Organizing committee. – PROF. MADASWAMY MONI, Chief Advisor (IT), Department of Agriculture, Government of India.

- The conference was very relevant and it had several enlightening sessions on various aspects of digitization. Day 2 was a bit heavy with many speakers; the session on agriculture was the highlight. It would be great to carry forward some ideas in the form of small and focused workshops. – MADHURI DUBEY, PH.D, Founder – National Skills Network –NSN.

- Congratulations to you and your team for organizing the Conference on a topical challenge India is facing. To say the least it was organized well. – MR. MANAS RANJAN MOHANTY, General Manager (HRM), Reserve Bank of India.

- It was a pleasure participating in the panel discussion. – DR. RANJAN PATNAIK, Technology Director, South Asia & Asean, DUPONT.

- Congratulations for successfully organizing the Conference. – DR. S. VENKU REDDY, Founder President & Executive Director of Participatory Rural Development Initiatives Society.

- Conference was good and well conducted. – DR. G VIVEKANAND, Advisor–Interstate Affairs, Government of Telangana.

- Congratulations for successfully conducting the 4th International Conference on Life Skills & Livelihood Skills. – DR.K S VIJAYA SEKHAR, Principal Researcher, Research Center for eGovernance (RCeG), IIIT Hyderabad.

- Really, it was very professionally manged event, highly useful and I personally benefited out of that. Once again hearty congratulations to you for organizing such a wonderful event. – DR. K. P. WASNIK, Additional Commissioner (Extension), Department of Agriculture Cooperation & Farmers Welfare, Government of India.

CONFERENCE HOSTS

RURAL ECONOMIC AND EDUCATIONAL DEVELOPMENT SOCIETY
Interventions for Improved rural life ...

REEDS (www.reeds.in)

Rural Economic and Educational Development Society - REEDS is a Not-for-Profit organization involved in formulating and implementing programs relating to various spheres of rural life. REEDS programs/projects spread across in seven states - Telangana, Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Odisha, and Tamilnadu and have its regular presence in the states of Telangana, Andhra Pradesh and Odisha. REEDS Action Programs include Drinking Water & Sanitation; Skills Development; Awareness & Education; and Monitoring & Evaluating Developmental Programs.

Life Skills & Livelihood Skills International

LSLSI (www.lslsi.org)

Life Skills and Livelihood Skills International - LSLSI is an initiative of REEDS to address various issues specific to the massive challenge in the area of skills development in India for meaningful utilization of its significant demographic dividend with International cooperation as a key ingredient. Recognizing skills development as a continuing process of national and international efforts, LSLSI aims to promote skill development and enabling support systems through co-operative and collaborative initiatives with a prime focus on rural, underprivileged sections of society and the informal sector workforce.

TELANGANA ACADEMY FOR SKILL AND KNOWLEDGE
DEPARTMENT OF ITE&C, GOVERNMENT OF TELANGANA

TASK (www.task.telangana.gov.in)

Telangana Academy for Skills and Knowledge – TASK is a nodal agency of Government of Telangana and an enabling platform between Government, Industry and Academia to enhance employability quotient of youth in the state. SKILLS 2017 was organized in collaboration and with TASK.

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