REVA UNIVERSITY
Bengaluru, India
Established as per the section 2(f) of the UGC Act, 1956,
Approved by AICTE, New Delhi

University Industry Interaction Centre in association with School of Mechanical and Mechatronics Engineering, REVA University

Organized IEDC Program on

"Frugal Innovation and Social Entrepreneurship and Innovation Risk Diagnostic"

About the event

University Industry Interaction Centre in association with **School of Mechanical and Mechatronics Engineering** organized IEDC Program on**"Frugal Innovation and Social Entrepreneurship and Innovation Risk Diagnostic"** on 14th October 2020 from 9:00AM to 4:00PM for 3rd semester students of **Mechanical and Mechatronics Engineering**.

Dr. K S Narayana swamy sir, Director, School of Mechanical Engineering, spoke with students and highlighted the importance of Innovation and Entrepreneurship.

The event was conducted with two specific session, details are as mentioned below:

IEDC Programme	
Morning 9AM to 12PM	**Afternoon 1PM to 4PM**
Topic: Frugal Innovation & Social Entrepreneurship	**Topic:** Innovation Risk Diagnostic
Mr. Dinesh Bhatt	Mr. Koppada Kiran

About IEDC:

The Innovation and Entrepreneurship Development Centres (IEDC) are platforms set up mainly in Engineering colleges with an aim to provide students an opportunity to innovate and experiment.

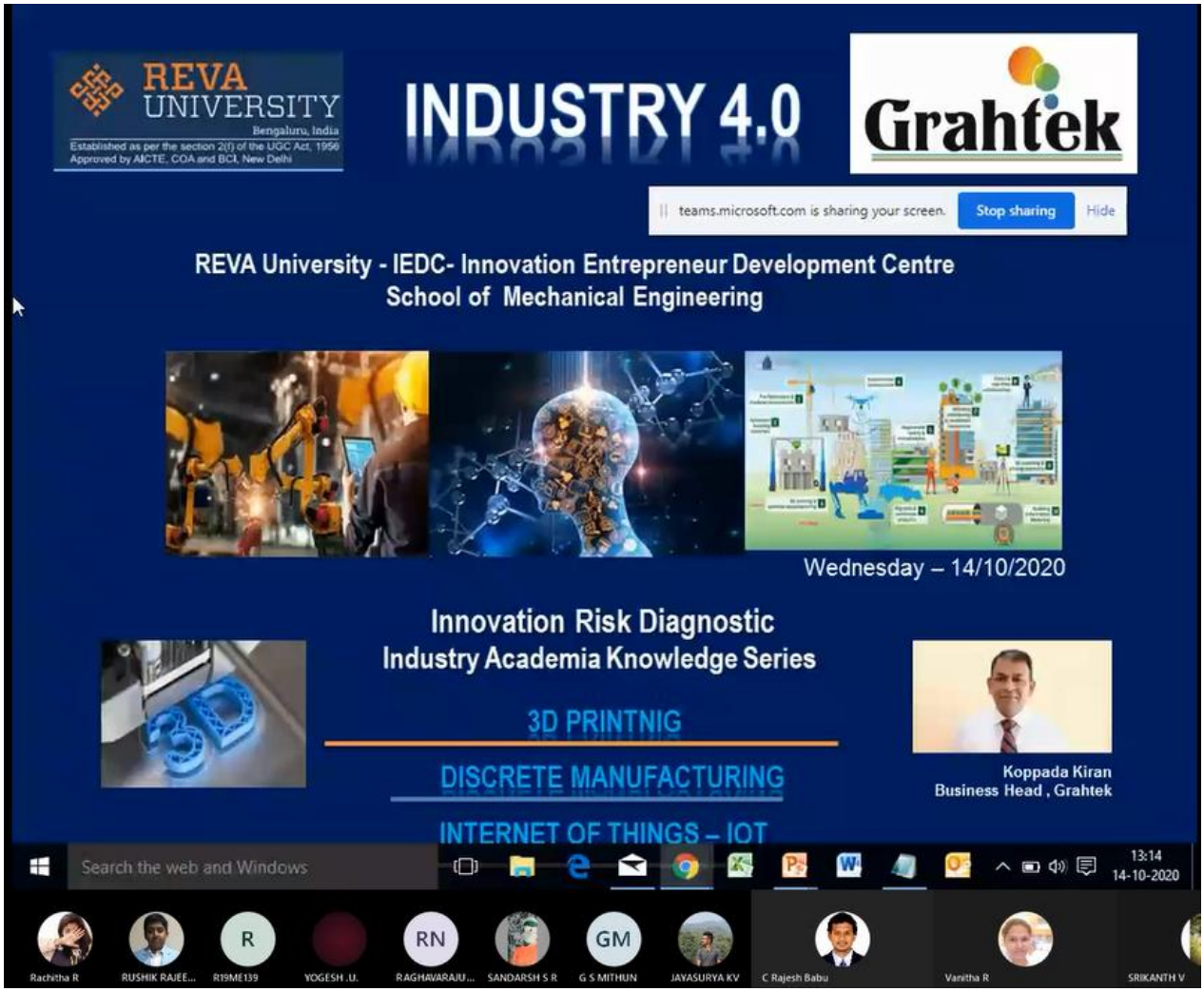
IEDCs works as the first launch pad for a student's entrepreneurial journey and provide them with access to cutting edge technology, world class infrastructure, high quality mentorship, early risk capital and external connects.

IEDCs act as common platforms in academic institutions to nurture innovation and entrepreneurship culture among student Fraternity.

Organized By	University Industry Interaction Centre in association with School of Mechanical and Mechatronics Engineering, REVA University
School Coordinators	Prof. C Rajesh Babu and Dr. Pramod Kumar Kataraki

UIIC Coordinator	Ms. Vanitha R
Date	14-10-2020
Targeted Audience	3rd Semester students from school of Mechanical and Mechatronics Engineering
No. of Participants	215
Morning Session Link	https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZDY3ZWRlOTEtMDIxYi00ODkxLWE0NDAtYmNkODc2M2EyMTJi%40thread.v2/0?context=%7b%22Tid%22%3a%22474565c1-bca4-4295-a2f5-b0c7dbf2591c%22%2c%22Oid%22%3a%22e76f3ffe-ef6a-4784-9a45-9b9f0d12d60e%22%7d
Afternoon Session Link	https://teams.microsoft.com/l/meetup-join/19%3ameeting_MjU4NTAwZTctMjk0ZS00Y2EwLThiNWYtMGEyNTc5MWE3YmEw%40thread.v2/0?context=%7b%22Tid%22%3a%22474565c1-bca4-4295-a2f5-b0c7dbf2591c%22%2c%22Oid%22%3a%22e76f3ffe-ef6a-4784-9a45-9b9f0d12d60e%22%7d

Photographs of the event

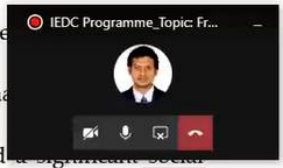


E – Banner for the Event

REVA NEST- A Journey towards nurturing startups

REVA UNIVERSITY
Bengaluru, India

- We at REVA NEST, a Technology Business Incubator established at REVA University campus aims to build the entrepreneurial eco system by empowering and nurturing student start-ups and incubating innovative technology based start-ups. *(It is registered as RAY Foundation, section* ***8 company under Companies*** *Act 2013. RAY – REVA Aspiring Youth Foundation)*
- The University **faculty members and industry mentors associated with REVA NEST** advice incubatee companies on Technology Product Development, Patenting, Commercialization, Marketing, Business Set up and Operations, and Human Resource Sourcing and Development.
- REVA NEST is **recognized by MSME**, supported **by Government of Karnataka, Department of Science and Technology**. REVA NEST has access to universities full equipped state of art Centre of Excellence in the sector of Electronics and Communication, Design & Manufacturing, Construction and Bio-technology. It offers Creative and Innovative program for aspiring entrepreneurs in the thrust areas of Internet of Things (IOT), Electronic System Design and Manufacturing (ESDM), Robotics & Intelligent Systems, Clean Energy, Art and Design.
- REVA NEST incepted on **October 15, 2018.**
- **NEST policy** document is framed : has a set of policies and guidelines to be adhered before as an incubate with business potential and revenue in mind.
- **Marketing Material :** NEST has it's own brochures, flyers, magazines and marketing ma start-up organizations.
- **Virtual & Social media Presence :** NEST has it's own website (www.revanest.com) and networking site impression.



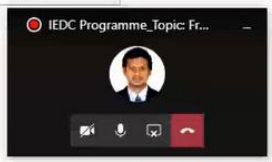
THANK YOU

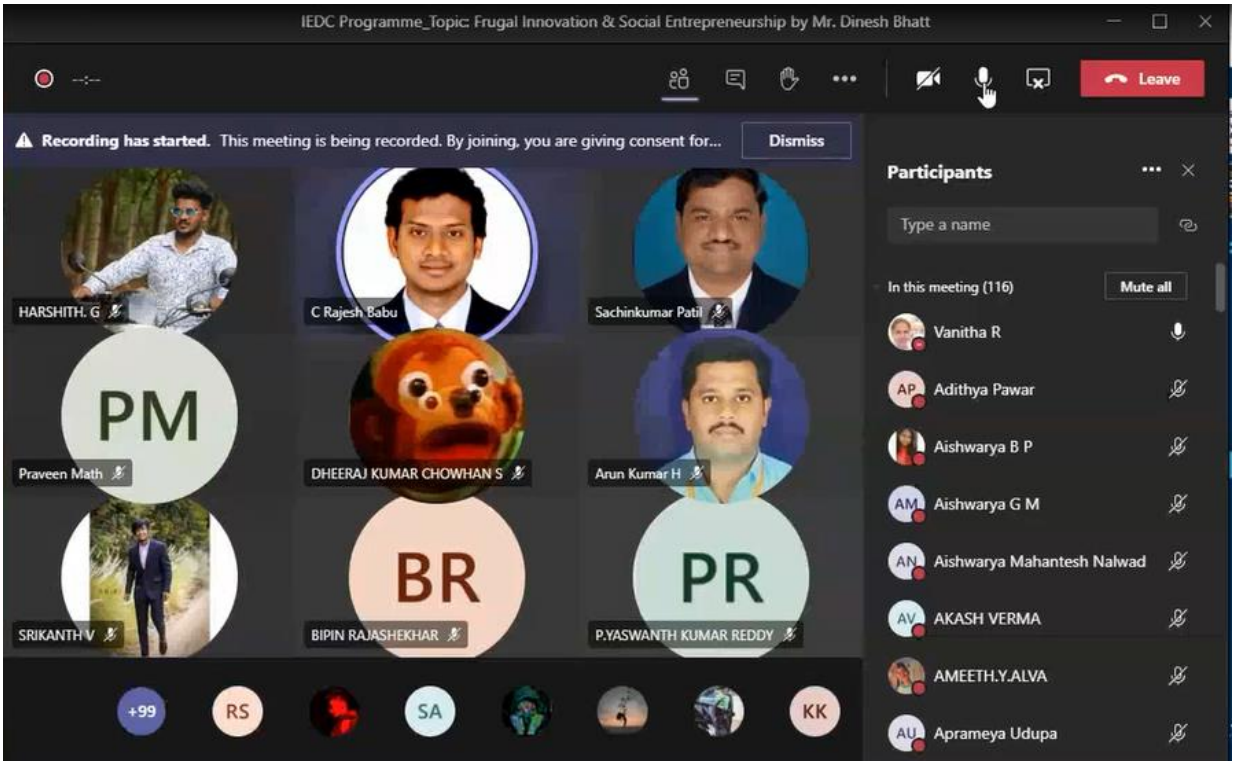
Pitch Day

1) Skykrafts Aerospace Technologies Pvt. Ltd. : AAHA Drones for agricultural usage
2) Dhanaina Technologies Pvt. Ltd : An enterprise resource planning software, Gettoil
3) Incubation Policy Document is released

- NEST Organized Pitch Day for Start-up Companies on 10th June 2019 to demonstrate their POC to experts and Investors.
- The event was presided by our Hon'ble Chancellor: Dr. P Shyama Raju, Vice Chancellor: Dr. S. Y. Kulkarni, Registrar: Dr. Dhanamjaya, Advisor: Dr. Talwar, Director of UIIC: Dr. Kirankumari Patil and directors of various schools of REVA University along with incubates. Two companies that were incubated under REVA NEST participated in the event. Skykrafts Aerospace Technologies Pvt. Ltd. demonstrated their product (Drones for agricultural usage) and Dhanaina Technologies Pvt. Ltd. pitched their product (An enterprise resource planning software, Gettoil)

Our Partners




IEDC Programme_Topic: Frugal Innovation & Social Entrepreneurship by Mr. Dinesh Bhatt
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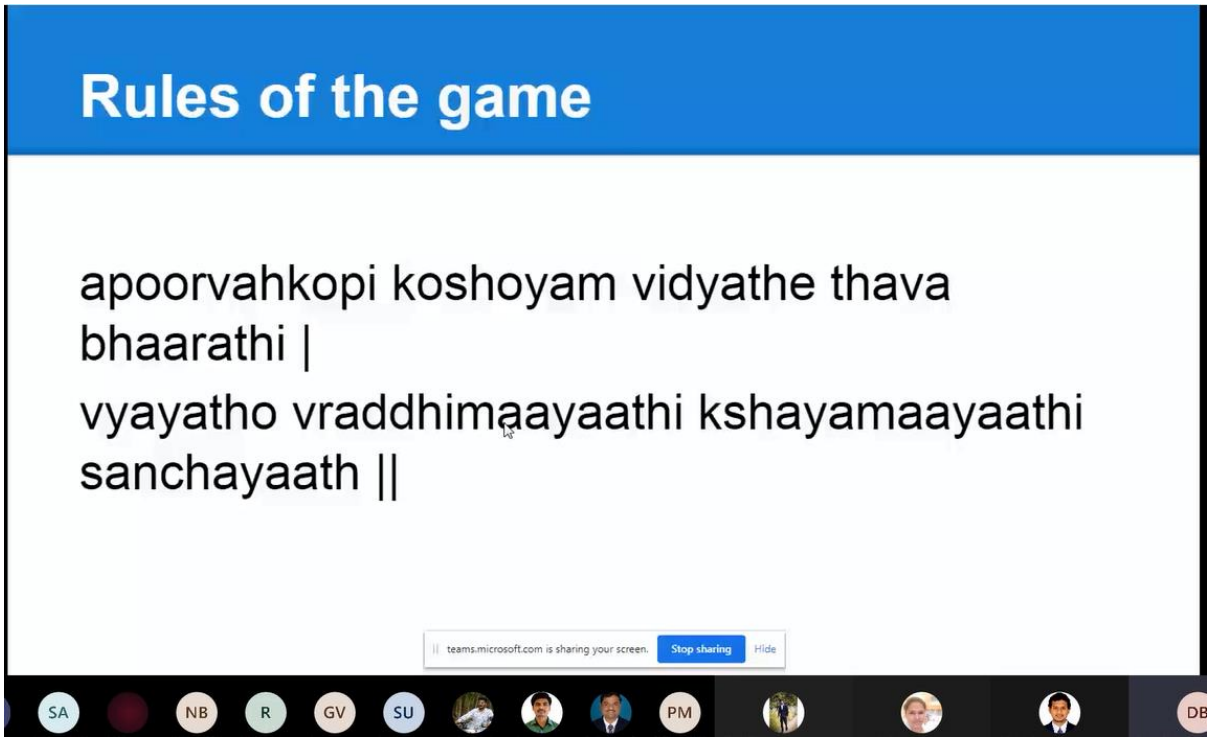
Aishwarya Mahantesh Nalwad
AKASH VERMA
AMEETH.Y.ALVA
Aprameya Udupa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vyayatho vraddhimaayaathi kshayamaayaathi sanchayaath ||
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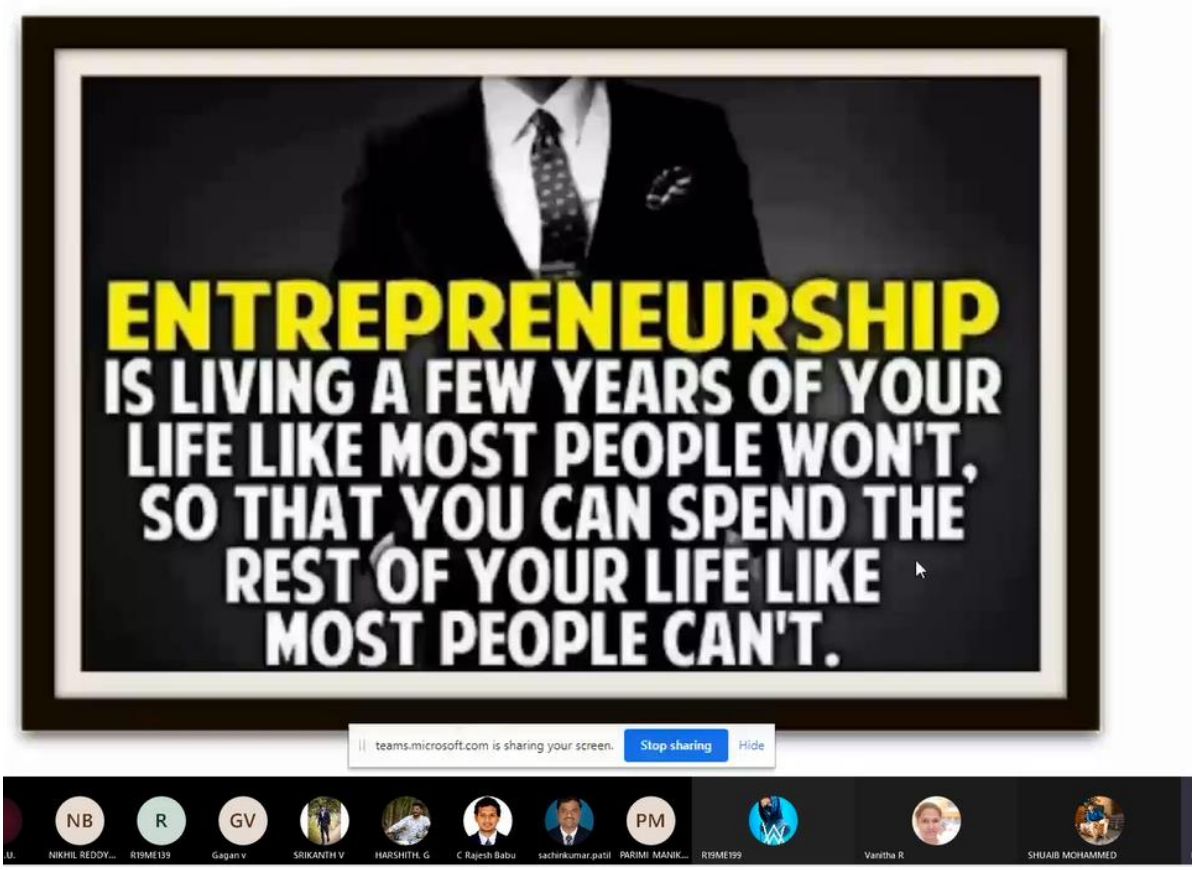
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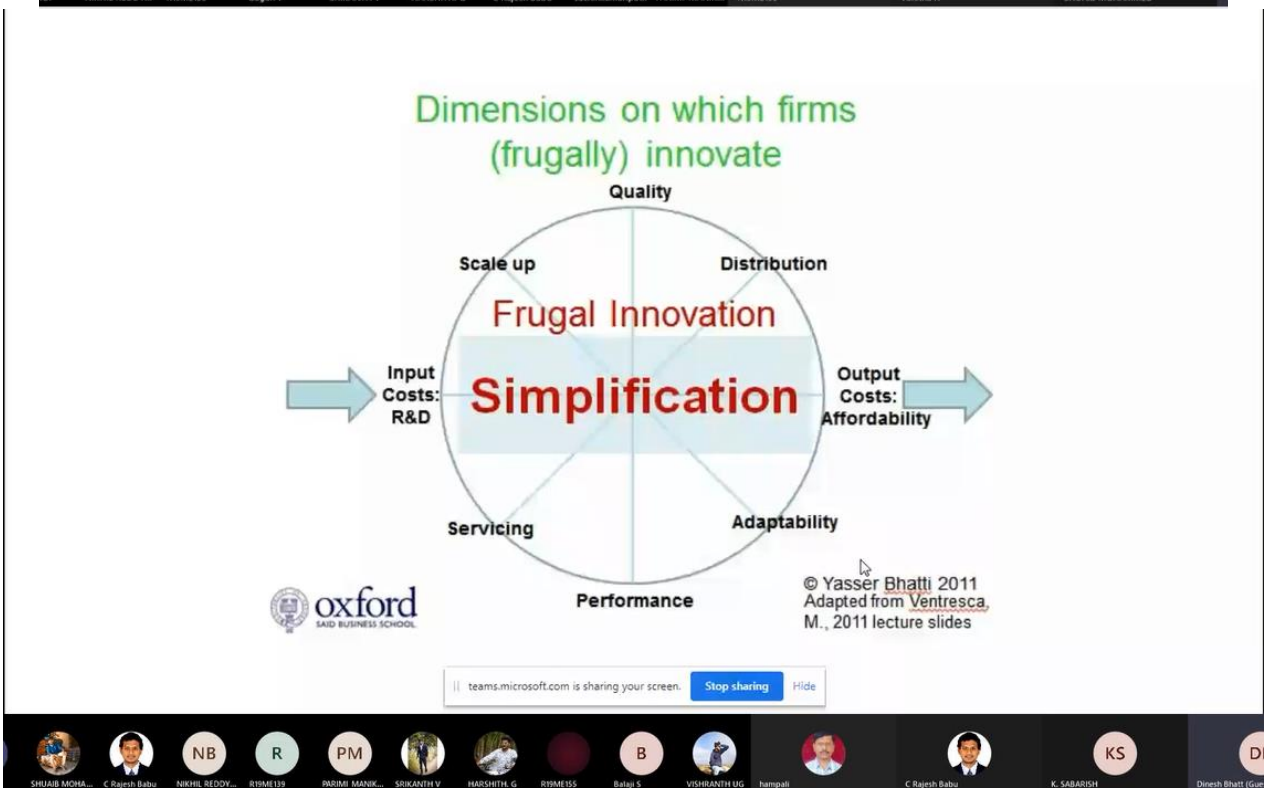
Dimensions on which firms (frugally) innovate
Quality
Scale up
Distribution
Frugal Innovation
Input Costs: R&D
Simplification
Output Costs: Affordability
Servicing
Adaptability
Performance
oxford
SAID BUSINESS SCHOOL
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K. SABARISH

Mechanical Engineering to StartUps

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Alchemai provides advanced data analytics for supply chain risk management.

Alpenglow Optics is developing 3-D microscopy technology to enable nondestructive slide-free pathology of clinical specimens for better disease detection, diagnosis and treatment.

BluHaptics is a software company pioneering new technology for better control of augmented robotics.
bluhaptics.com

JikoPower builds generators that convert heat into electricity for disaster preparedness, camping and low-resource communities.
jikopowerinc.com

Marine Construction Technologies has developed technology to reduce noise from pile driving and protect wildlife while improving the efficiency of marine construction projects.
marinecontech.com

MarineSitu makes marine environmental monitoring instruments accessible to turbine developers and other renewable marine energy companies.
marinesitu.com

Micro Phone Lens turns cell phones and tablets into microscopes.
microphonelens.com

Phoresa is developing an innovative test for infectious diseases to help doctors better diagnose and treat patients in a single visit.
phoresa.com

SonoMotion is developing non-invasive solutions for kidney stone disease.
sonomotion.com

Stasys Medical Corporation is commercializing a device to assess platelet dysfunction in trauma patients within minutes, helping emergency physicians save lives.
stasysmedical.com

VerAvanti is developing a laser-based medical camera to help cardiologists better diagnose and treat individuals who are at risk for stroke and/or heart attacks.
veravanti.com

VICIS has developed a helmet designed to mitigate impact forces in NFL, college and youth football.
vicis.co

Visiongate is a clinical stage pharmaceutical and diagnostics company developing products for the early detection and treatment of lung cancer and lung dysplasia.
visiongate3d.com

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Innovation – Risk Management

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Industry 4.0 Risk Framework

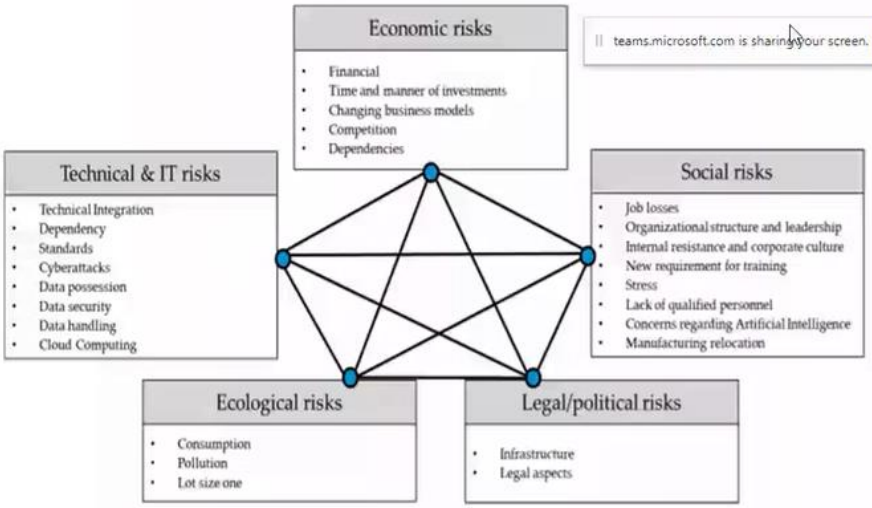

Figure 1. Industry 4.0 sustainable risk framework.

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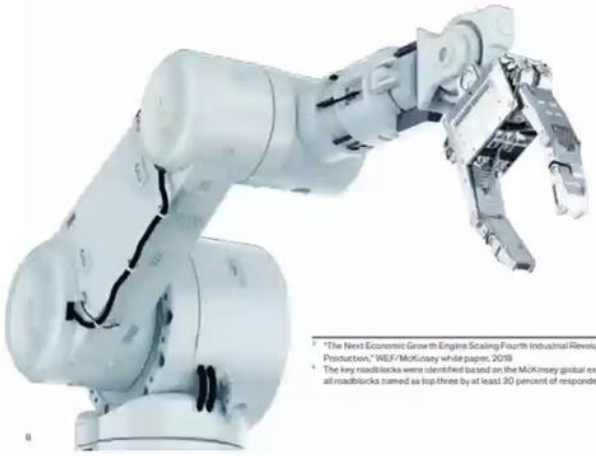
USD 3.7 trillion

value creation potential in 2025



[1] "The Next Economic Growth Engine Scaling Fourth Industrial Revolution Technologies in Production," WEF/McKinsey white paper, 2018

[2] The key roadblocks were identified based on the McKinsey global experts survey and reflect all roadblocks named as top three by at least 80 percent of respondents.

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5 Trends in Mechanical Engineering for 2020

3D Printing

- Also known as Additive Manufacturing, 3D printing is a complex process where an object's model is created using CAD software – a detailed object modelling software.
- The object then needs to be saved in a STL (Standard Triangular Language) format which allows the designed object to be 'sliced' into ultra-thin layers.
- When transferred to the 3D printing machine, these layers are then printed in a formation of fine plastic layers, each layer bonded to the layer preceding it to create precise shapes.
- Mechanical engineers have designed objects for 3D printing that have made huge improvements towards mankind, including prosthetic limbs, artwork for the blind and edible objects.

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5 Trends in Mechanical Engineering for 2020

Internet of Things (IoT)

- The Internet of Things (IoT) is a system of interrelated computing devices or machines which have been provided with unique identifiers (UIDs) and have the ability to transfer data over a network without needing human-to-human or human-to-computer interaction.
- A 'thing' in the IoT can be a person, animal or object, for example; a human with a heart monitor implant, an animal with a biochip transponder, or even an automobile which has built in sensors to alert the driver of any changes to the vehicle, such as low tyre pressure.These 'things' become part of the IoT when they have been assigned an IP address that can transfer data over a network.

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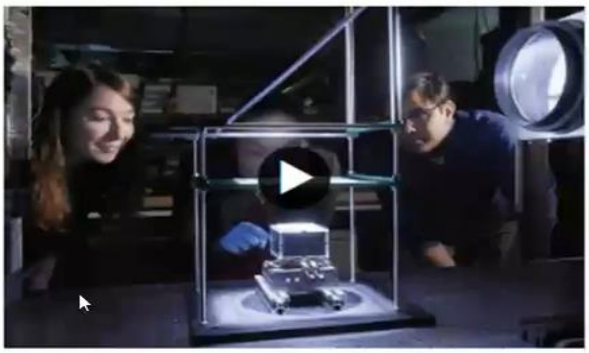
Mechanical Engineering Projects solved with Open Innovation



Drinking Water From Thin Air

A device developed by Evelyn Wang's team harvests clean drinking water from vapor in the air, even in the most arid conditions.

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Mechanical Engineering – University of Washington

Market impact

Since 2012, ME has been responsible for:

578	24%	229	35	13%
new patents filed	of all UW Engineering patents	individual licensed technologies	companies that have licensed ME technologies	of all startups at the UW

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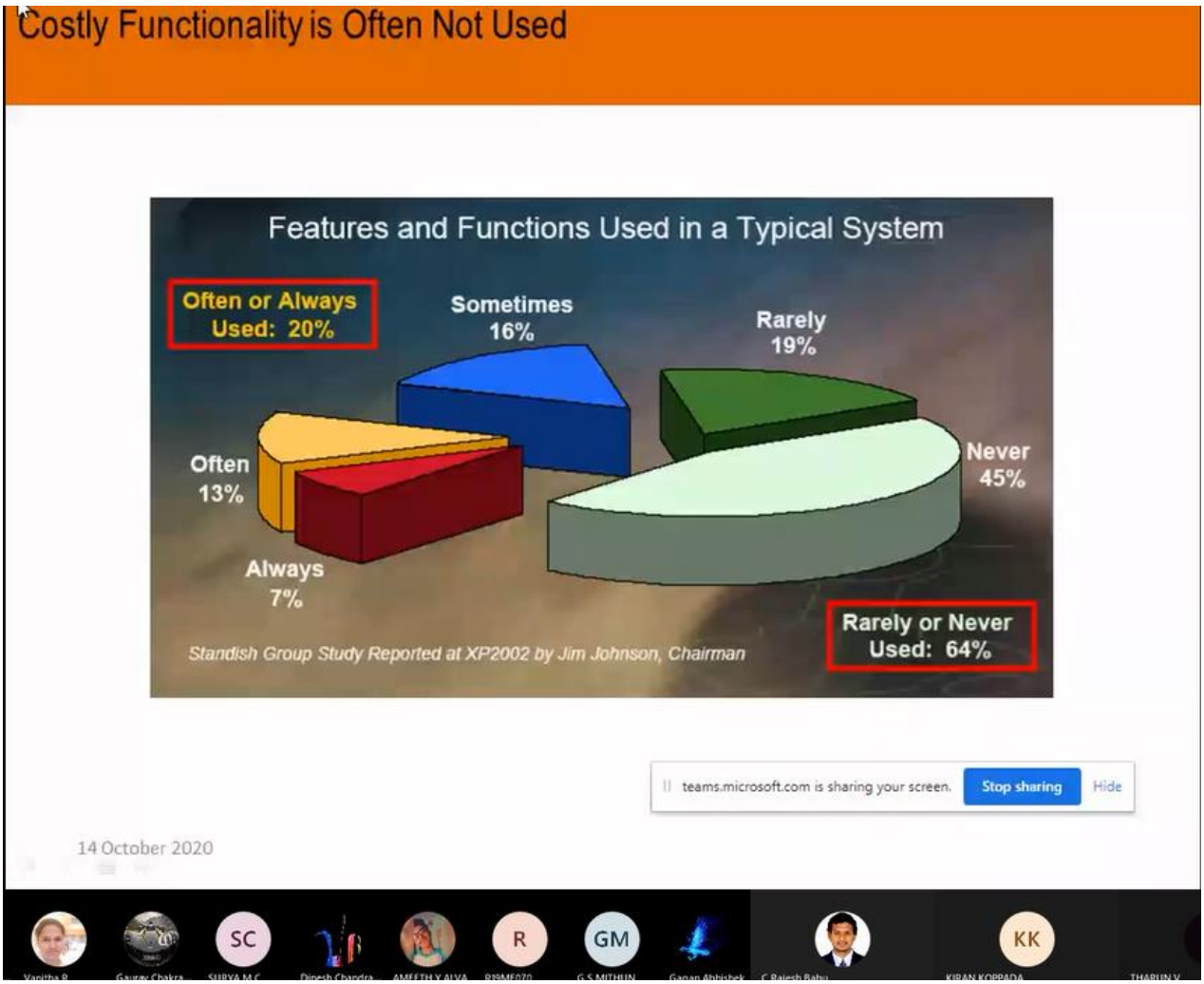

We would like to thank our Honorable Chancellor Dr. P. Shyama Raju Sir for providing all facility and supporting to organize such events. We also thank Vice Chancellor Dr. K. Mallikharjuna Babu**,** Registrar Dr. M. Dhanamjaya, Dean, Placement, Training, and Planning Dr. N. Ramesh**.** We would like to thank Dr. K S Narayana Swamy sir, Director, and also Dr.Mahesh L, Assistant Director, School of Mechanical Engineering, for providing all the facilities, support and encouragement towards organizing the sessions. We also thank to Dr. Kiran Kumari Patil, Director, University Industry Interaction Center, for the involvement in taking up and organizing the Program.

We thank the coordinators and all the staff members involved for the successful conduction of the session

Coordinators: **Director**

Prof. C Rajesh Babu **Dr. K S Narayanaswamy**

Dr. Pramod Kumar Kataraki