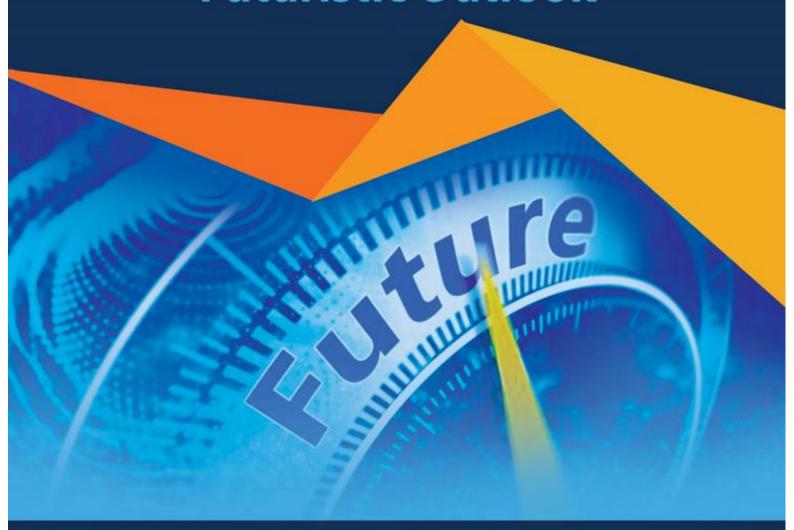


NEWSLETTER

Year 2022 | Issue 04

Futuristic Outlook



A Product of Office of Research Innovation and Commercialization (ORIC),
University of Management and Technology, Lahore, Pakistan

Message from Co-Founder, Director-General, and Head ORIC – UMT



We live in the Modern age, where we do all over work with the help of technology. We know technology by the name "technological know-how". Discover the latest science and technology news and videos on breakthroughs shaping tomorrow's world with Futurism. The innovation of science has a long history producing many important figures and many developments in the field. Moreover, it made communication easier for us. Humans have cleaned up and created some fantastic and sometimes orthodox inventions.

For a long time, organizations have been experiencing various kinds of problems, resulting in their management exploring various changes to introduce into their mode of operation. Innovation and technology cycles have benefited organizations as they have assisted many organizations in perceiving the changes. Innovation refers to the incorporation of new functionalities into existing products and processes. As a result, an organization settles down to attain productivity.

So, every researcher and faculty member should be up-to-date about innovation in their respective field; that's why ORIC-UMT introduce the Futuristic Outlook for the UMT family to commensalism with the Innovative world.

Prof. Abid Hussain Khan Shirwani Co-Founder, Director-General and Head ORIC University of Management and Technology, Lahore, Pakistan

Table of Contents

Μe	essage from Co-Founder, Director-General, and Head ORIC – UMT	2
Га	ble of Contents	3
Α -	- School of Engineering & School of System and Technology	5
	1: Electric Bikes Have a Small Problem: They Keep Bursting into Flames	5
,	2: Scientists Strap Cameras to Sharks and Discover Huge Underwater Forest	7
	3: In Nasa Simulation, Humankind Dismally Failed to Save Earth from Killer Asteroid	8
4	4: Tesla Reportedly Canceling Solar Roof Installations Across the Country	9
:	5: Boston Dynamics Sues Competitor That Put a Gun on Its Robodog	11
(6: Guy Discovers A Way to Unlock Any Pixel Phone Without the Passcode	12
,	7: Terrifying! Hacked Robodog Walks on Hind Legs	13
;	8: Startup Says it's Building a Giant Co ₂ Battery in The United States	14
9	9: Nasa Adjusting James Webb Orbit to Get Damaged by Meteorites Less	15
	10: Amazing Map Lets You Scroll Through the Entire Known Universe	16
	11: Scientists Increasingly Calling to Dim the Sun	17
В-	- School of Food and Agricultural Sciences	19
	1: Meal Kit Giant Accused of Using Monkey Labor to Source Coconut Milk	19
2	2: Divers Growing Veggies in Underwater Greenhouses	20
	3: FDA Gives First Go Ahead for Lab Grown Meat Product	22
C -	School of Governance and Society	24
	1: Big Tech Announced More Than 45,000 Layoffs in Recent Months	24
2	2: A Tesla Executive Under Investigation is Now Working at Spacex For Some Reason	25
	3: Big Tech Announced More Than 45,000 Layoffs in Recent Months	26
4	4: The Guy Who Invented The World Wide Web Thinks We Should "Ignore" Web3	27
:	5: Elon Musk Denies "False" Reports of Spacex Stock Sale	29
(6: Elon Musk's Wealth Has Plummeted by Over \$100 Billion This Year	30
D-	- Office of Research Innovation and Commercialization (ORIC)	31
	1: Events Organized and Facilitated by ORIC	31
	1.1 Arranged the Collaborating Meeting with the President of Sundar Industrial Estate	31
	1.2 Training Program on Web 3.0 and Metaverse on Sunday 6 November, 2022, at University of Management and Technology (UMT).	33
	1.3 Training Program on Web 3.0 and Metaverse on Sunday 13 November, 2022, at University of Management and Technology (UMT).	
	1.4 Training Program on Web 3.0 and Metaverse on Sunday 20 November, 2022, at University of Management and Technology (UMT).	
	1.5 ORIC organized a free Seminar on "11 Rules of Life"	39

1.6 ORIC organized a free Seminar on "11 Rules of Life"	40
1.7 ORIC organized a free Seminar on "Summary of 500 Books in 10 Points"	41
1.8 ORIC organized a free Seminar on "11 Laws of Life"	42
1.9 Training Program on Web 3.0 and Metaverse on Sunday 27 November, 2022, at University of Management and Technology (UMT).	
2: ORIC-UMT participated PHEC-All Punjab Universities Innovation Expo	45
3: 1st Meeting of UMT, PIAIC and Superior Information Systems Incorporation.	48
4: ORIC Attended "Pakistan Japan Diplomatic 70 th Anniversary Celebration & Exhibition" on Thursday, 10 November 2022	50
5: Industrial-Academia Collaborating Meeting with the CEO of Roshan Packages Limited	52

A - School of Engineering & School of System and Technology

1: Electric Bikes Have a Small Problem: They Keep Bursting into Flames

Electric bicycles are meant to be a boon for green transit — but their occasionally volatile batteries are causing issues both in terms of actual safety and the realm of public perception.

As NPR notes in a gutting new story about the risk of e-bike battery fires, the Fire Department of New York has investigated 174 battery fires so far in 2022, which is going on double from 2021, and quadruple from 2020.

The primary factor in these fires is the e-bikes' lithium ion batteries, combined with the fallibility of charging equipment. While the chargers are supposed to turn off once fully charged, sometimes they don't, sometimes resulting in disaster.

The batteries have also been known to leak electrolytes from the battery's core, which can sets off a dangerous chain reaction resulting in a blaze.

"These bikes when they fail, they fail like a blowtorch," Dan Flynn, the FDNY's chief fire marshal, told NPR. "We've seen incidents where people have described them as explosive — incidents where they actually have so much power, they're actually blowing walls down in between rooms and apartments."

In NYC, the e-bike fire problem is linked by residents' growing hunger for delivery, which has fueled the bikes' meteoric rise.

Indeed, as NPR notes, a sizable number of the e-bike battery fires involve e-bikes owned by delivery workers, whose long hours can weaken the batteries and make them take longer to charge. Some can take up to eight hours to charge once worn down, and it's impossible to watch them for that entire time — especially on a delivery worker's grueling schedule.

Buying a new battery once an old one has gotten beat up can get expensive, so many delivery workers who own e-bikes will, as the report notes, choose instead to buy cheaper refurbished batteries that are often swapped interchangeably for others and are, some advocates say, more likely to explode or cause fires.

While NYC officials are proposing solutions — such as Mayor Eric Adams' promise to direct \$1 million to delivery worker centers where they can safely charge their ebikes and a city council proposal to ban the sale of used batteries within city limits

— these pragmatic New Yorkers know the government by itself won't fix the growing danger from e-bike battery fires.

"They do, you know, God's work, so to speak, because New Yorkers like to have food delivered," New York City Councilmember Gale Brewer, who sponsored the used battery ban, told NPR. "So now the question is how do they get the new batteries that are not going to cause fires?"

It's a provocative question, and one that needs to be answered quickly, given that use of the vehicles is spiking every year.

2: Scientists Strap Cameras to Sharks and Discover Huge Underwater Forest

Researchers attached cameras and trackers to the dorsal fins of tiger sharks to study the seabed.

To their surprise, the sharks led them to an astonishing discovery: a massive underwater forest of seagrass — the world's largest, they believe — stretching 35,000 square miles across the Caribbean seabed, as detailed in a new study published in the journal Nature Communications.

"This finding shows how far are we from having explored the oceans, not just in the depths, but even in shallow areas," coauthor Carlos Duarte from the King Abdullah University of Science and Technology in Saudi Arabia, told The Guardian.

Chum Dumbs

Seagrass, an important feeding ground for marine animals, can also store copious amounts of carbon, making studying it critical in the fight against climate change.

There's a lot we don't know about the large swathes of seagrass lurking beneath the surface, including how much area they cover, as they're tricky to spot using aerial or satellite-based photography.

To save money and time while getting a closer look, the team of researchers chose to forego human divers or submarines, sending agile tiger sharks instead. The expert divers are able to cover large swathes of the seabed effortlessly.

Knowing where there's seagrass is crucial in our understanding of how climate change is affecting the globe and marine life. In fact, disturbing it can cause significant amounts of carbon dioxide to be released, contributing to climate change.

Seagrass and other ecosystems like it are "probably one of the best allies and assets that we have in terms of naturally trying to mitigate the effects of climate change," Oliver Shipley, senior research scientist at marine science non-profit Beneath the Waves and coauthor of the paper, told The Guardian.

Researchers are now hoping to user other mammal species to explore other still-unexplored corners of the oceans.

3: In Nasa Simulation, Humankind Dismally Failed to Save Earth from Killer Asteroid

NASA has apparently gotten into tabletop gaming, but the stakes are decidedly higher than an evening of "Dungeons & Dragons."

As Scientific American reports, NASA's most recent tabletop simulation — or Planetary Defense Tabletop Exercise, if you want to make it official — was its fourth. And the stark conclusion of the mixed virtual and in-person gathering, conducted along with the Johns Hopkins Applied Physics Lab (APL) campuses in Maryland and North Carolina? Humanity is woefully unprepared for the threat of a catastrophic asteroid impact.

"We designed it to fall right into the gap in our capabilities," Emma Rainey, a senior scientist at Hopkins' APL who was part of the creation of the simulation, told the magazine. "The participants could do nothing to prevent the impact."

The simulation began with the discovery of an asteroid on a trajectory toward Earth, SciAm reports, and each subsequent meeting in the days-long exercise would hop ahead in the timeline of the crash course. Participants were given information about where the asteroid was headed, its size, and how likely an impact would be. The sim's final stages were just before and just after the asteroid's impact.

In a sense, we're better prepared for a looming asteroid impact than ever before. Last month, NASA smashed a small spacecraft into a medium-sized space rock to test whether it could be nudged off course, with promising results.

But real people are challenging in ways more complex than astrophysics. As in the 2021 movie "Don't Look Up," participants in the simulation found that misinformation made the scenario worse. The "asteroid denier" and "fake news" crowds were particularly difficult aspect of the simulation for the participants to handle.

"Misinformation is not going away," Angela Stickle, an APL senior research scientist who also helped facilitate and create the simulation, told SciAm. "We put it into the simulation because we wanted feedback on how to counteract it and take action if it was malicious."

4: Tesla Reportedly Canceling Solar Roof Installations Across the Country

Eager customers of Tesla's solar roof program have been left holding the bag as the EV automaker says it's nixing operations in numerous markets, Electrek reports.

The cancellations underscore the degree to which the program has never really taken off. By Elecktrek's estimates, Tesla only installed its solar roofs on around 300 houses during the second quarter of 2022 — an underwhelming figure, especially since CEO Elon Musk has claimed the company's energy division will become as large as its automotive one.

And now, some Tesla Solar customers have been receiving emails from the company telling them that their orders for solar panels are being canceled.

"Upon further review of your project, our team has determined that your home is in an area we no longer service," the emails read, as quoted by Electrek. "As we cannot complete your order, we have processed your cancellation."

Solar Scapegoat

Tesla tends to be opaque when it comes to its energy division, so it's unclear which specific markets got screwed over. Electrek says the reports it's received have come from customers "in major solar markets including the greater Los Angeles area, Northern California, Oregon, and Florida."

In addition, the outlet also reports that Tesla has laid off employees in the solar scheduling, planning, and design department, but just how many is unspecified.

Historically, Tesla's solar program — controversially acquired by buying the company SolarCity in 2016 — is the one that gets the short end of the stick when it comes to reining in the budget.

In 2019, Musk admitted in a pre-trial deposition that, "If I did not take everyone off of solar and focus them on the Model 3 program to the detriment of solar, then Tesla would have gone bankrupt."

"So I took everyone from solar, and said: 'instead of working on solar, you need to work on the Model 3 program.' And as a result, solar suffered, as you would expect," he added.

Musk similarly admitted in 2022 that, for the year before, he had "shortchanged" Tesla's energy division in favor of pushing out more cars.

Considering that Musk bought the division from SolarCity with the alleged intention of bailing out his cousins that owned it, maybe it's not too surprising that the CEO seems to have no qualms over gutting it multiple times.

5: Boston Dynamics Sues Competitor That Put a Gun on Its Robodog

According to the Robot Report, Hyundai-owned robotics company Boston Dynamics is suing competitor Ghost Robots, alleging that the rival robot maker has infringed on seven of Boston Dynamics' patents related to the company's well-known robodog, the Spot quadruped.

A lawsuit isn't that surprising, given that the robots all look pretty much identical, and Spot, which hit the market in 2019, definitely came out first. Ghost Robotics came out with its first model, the Spirit 40, in 2020, with its next robodog iteration, the Vision 60 — which made major headlines when the company strapped a sniper rifle to it— introduced the following year.

According to Engadget, Boston Dynamics first asked Ghost Robotics to review their robodoggo patents back in 2020 — just a few months after Spirit 40 was made available — and have sent multiple cease-and-desist letters since. Ghost Robotics apparently failed to cease and desist, and now Boston Dynamics wants to take them to court.

"We do not comment on the specifics of pending litigation," a spokesperson from Boston Dynamics told the Robot Report over email. "We welcome competition in the emerging mobile robotics market, but we expect all companies to respect intellectual property rights, and we will take action when those rights are violated."

Again, as the robodogs do — gun aside — look basically the same, a lawsuit was inevitable. But while Boston Dynamics has emerged as a major market player, it's still relatively young, as is most of the robotics industry. There's opportunity here for a precedent to be set, and the outcomes of this case could well determine whether Boston Dynamics' grip on the robodog market will get even tighter, or if it'll have to concede a fair amount of market share to its burgeoning competitors.

How the court case shakes out remains to be seen, but in the meantime, might we suggest switching up the breeds of these mechanical mutts? Something with short legs, like a chihuahua or a wiener dog, for example, might be helpful for variety's sake. Sure, the relative mechanics might be the same, but they'd at least look different. No guns though, please.

6: Guy Discovers A Way to Unlock Any Pixel Phone Without the Passcode

David Schütz, a bug hunter, discovered a clever way to unlock any Google Pixel phone without a passcode — and the vulnerability may affect swaths of other Android phones as well.

According to a post on Schütz's blog, the vulnerability is exploited by using another SIM card. First, a hacker with physical access to the phone would input three incorrect fingerprint scans, causing biometrics to be disabled.

From there, a hacker would remove the original SIM card and replace it with their own. They would then input the wrong PIN to unlock the foreign SIM.

This causes the phone to instead ask for the SIM's PUK code, or Personal Unlocking Key, which the hacker would know since they've placed in their own SIM. When that's inputted, the phone inexplicably unlocks to the home screen.

And this was no fluke: Schütz says he was able to replicate this multiple times, both on a fully updated Pixel 6 and an older Pixel 5.

"My hands started to shake at this point," Schütz said in the post. "What the f**k? It unlocked itself?"

https://www.youtube.com/watch?v=dSgSnYPgzT0

Schütz sent in the report almost immediately. To Google's credit, he says Google flagged it and filed it in 37 minutes. But after that, "the quality and the frequency of the responses started to deteriorate."

"After it got triaged, there was basically a month of silence," he wrote.

Eventually, Google contacted Schütz in a formal email saying the bug had already been reported by someone else and that he wouldn't get any reward money — a brusque dismissal, considering that it was his report that prompted them to address the bug.

Two months later after a September security update and still with no follow up from Google, Schütz tried to reproduce the bug again. It still worked. Deciding that he had enough, Schütz showed the vulnerability to Google engineers in person. That finally got their attention.

"After I started 'screaming' loudly enough, they noticed," Schütz said.

His persistence earned him a reward of \$70,000, with a fix now reflected in the company's source code — but if you ask us, he should've gotten the full \$100 grand.

7: Terrifying! Hacked Robodog Walks on Hind Legs

Perhaps it's only a matter of time until the robots catch up with us and take over the planet.

Case in point: a four-legged robodog learning how to walk on its two hind legs.

Researchers from Worcester Polytechnic Institute (WPI) and ShanghaiTech University have developed an off-the-shelf "shin" solution that allows quadruped robots to speedrun evolution, IEEE Spectrum reports — and the results are eerie.

https://www.youtube.com/watch?v=Xf-fKWNRLcc&t=3s

The modification is meant to allow practically any quadruped to walk on two legs, with minimal amounts of changes.

The 3D-printed appendages can be installed onto two of the robot's legs, allowing it to balance its entire weight on them.

In fact, as demonstrated in a video, the reinforcements allowed a small quadruped robot to take its first, albeit shaky steps.

"Bipedal robots usually have more degrees of freedom in their legs to allow a more dynamic and adaptive locomotion," WPI researcher Andre Rosendo told IEE Spectrum, "but in our case, we are focusing on the multimodal aspect to reap the benefits from two worlds: stability and speed from quadrupeds, manipulability and a gain in operational height from bipeds."

Thanks to the robot's ability to stand up, "we already have some preliminary results on climbing to places that are higher than the center of gravity of the robot itself," Rosendo added. "After mechanical changes on the forelimbs, we will better evaluate complex handling that might require both hands at the same time, which is rare in current mobile robots."

It's a fascinating glimpse of what state-of-the-art robots could soon be capable of. But, perhaps, it's best to be cautious of what we end up teaching these robots — you know, before it's too late.

8: Startup Says it's Building a Giant Co₂ Battery in The United States

Carbon dioxide has a bad rep for its role in driving climate change, but in an unexpected twist, it could also play a key role in storing renewable energy.

The world's first CO2 battery, built by Italian startup Energy Dome, promises to store renewables on an industrial scale, which could help green energy rival fossil fuels in terms of cost and practicality.

After successfully testing the battery at a small scale plant in Sardinia, the company is now bringing its technology to the United States.

"The US market is a primary market for Energy Dome and we are working to become a market leader in the US," an Energy Dome spokesperson told Electrek. "The huge demand of [long duration energy storage] and incentive mechanisms like the Inflation Reduction Act will be key drivers for the industry in the short term."

Storage Solution

As renewables like wind and solar grow, one of the biggest infrastructural obstacles is the storage of the power they produce. Since wind and solar sources aren't always going to be available, engineers need a way to save excess power for days when it's less sunny and windy out, or when there's simply more demand.

One obvious solution is to use conventional battery technology like lithium batteries, to store the energy. The problem is that building giant batteries from rare earth minerals — which can be prone to degradation over time — is expensive, not to mention wasteful.

Energy Dome's CO2 batteries, on the other hand, use mostly "readily available materials" like steel, water, and of course CO2.

In Charge

As its name suggests, the battery works by taking CO2, stored in a giant dome, and compressing it into a liquid by using the excess energy generated from a renewable source. That process generates heat, which is stored alongside the now liquefied CO2, "charging" the battery.

To discharge power, the stored heat is used to vaporize the liquid CO2 back into a gas, powering a turbine that feeds back into the power grid. Crucially, the whole process is self-contained, so no CO2 leaks back into the atmosphere.

The battery could be a game-changer for renewables. As of now, Energy Dome plans to build batteries that can store up to 200 MWh of energy. But we'll have to see how it performs as it gains traction.

9: Nasa Adjusting James Webb Orbit to Get Damaged by Meteorites Less

NASA's James Webb Space Telescope is adjusting its orbit to hopefully avoid getting pelted with so many micrometeorites.

"We have experienced 14 measurable micrometeoroid hits on our primary mirror, and are averaging one to two per month, as anticipated," Webb lead mission systems engineer Mike Menzel said in an update.

"The resulting optical errors from all but one of these were well within what we had budgeted and expected when building the observatory," he added, referring to a meteorite impact that made a larger-than-expected dent in one of the telescope's 18 hexagonal mirror segments earlier this year.

Fortunately, despite the noticeable dent in mirror segment C3, "our current optical performance is still twice as good as our requirements," Menzel said.

Now, a working group of experts have decided that while the impact was a statistically rare event, future observations will be made while facing the telescope away from the "micrometeoroid avoidance zone." Why? Because if the telescope is facing the other way, the meteorites that do strike it won't hit it quite so hard.

"Micrometeoroids that strike the mirror head on (moving opposite the direction the telescope is moving) have twice the relative velocity and four times the kinetic energy," explained Lee Feinberg, Webb optical telescope element manager, in the update, "so avoiding this direction when feasible will help extend the exquisite optical performance for decades."

In other words, James Webb will still be able to observe the same targets but may have to wait until it reaches a different point in its orbit to do so.

10: Amazing Map Lets You Scroll Through the Entire Known Universe

The universe is so vast and old that we can't possibly fathom it all. But we can make some pretty admirable efforts.

Take this stunning new map, put together by astronomers at Johns Hopkins University, that displays the entire known universe in all its glory, showcasing some 200,000 galaxies as tiny dots that span all the way to the cosmos' observable limits.

Using data gathered over 20 years by the Sloan Digital Sky Survey, it shows the real positions and colors of the galaxies in a densely packed celestial slice which lets users easily scroll through billions of years.

You've probably seen other maps of the universe before, but likely none this impressive. Excitingly, it uses data previously unreleased to the public, and it might be the most comprehensive cosmic map made for the average Joe yet.

"Astrophysicists around the world have been analyzing this data for years, leading to thousands of scientific papers and discoveries." said the map's creator and John Hopkins professor Brice Ménard, in a press release.

"But nobody took the time to create a map that is beautiful, scientifically accurate, and accessible to people who are not scientists," he continued. "Our goal here is to show everybody what the universe really looks like."

The map's narrowest point originates from our home, the Milky Way, surrounded by light blue dots of spiral galaxies up to two billion light years away from Earth. Further away, yellow briefly takes over, where elliptical galaxies outshine the dimmer spiral ones.

Then the map takes us into a vibrant gradient of red. These are also elliptical galaxies, but thanks to the phenomenon aptly known as redshifting, their yellow light gets stretched into red.

Lurking behind is a tremendous ocean of blue, where the dots represent quasars, the luminous supermassive black holes at the center of distant galaxies.

Even a few errant red dots, depicting redshifted quasars, are speckled across the universe's penultimate boundary that's shrouded in hydrogen gas.

Finally, the map terminates at 13.7 billion light years away, or years ago, where all that can be discerned is the cosmic microwave background.

11: Scientists Increasingly Calling to Dim the Sun

The idea of "solar geoengineering," or shooting untold dollars' worth of particles into the stratosphere to reduce the warming of the Sun, has long been seen as a last resort for tackling a growing climate crisis.

Despite plenty of opposition to the idea of meddling with entire ecosystems at once, an increasing number of scientists are starting to seriously study the possibility, *The New Yorker* reports.

Just last month, the White House announced a five-year research plan to study geoengineering, a sign that the idea has moved out of the realm of science fiction amidst a period of rapidly rising temperatures and failed climate targets.

Even with an almost complete halt on the use of fossil fuels, humanity is headed towards a catastrophe. The Paris Agreement, a legally binding international treaty on climate change, was adopted by 196 countries, who agreed to try their best to limit global warming to as close to 1.5 degrees Celsius as possible.

But achieving that target has proven nigh impossible. According to an October report by UN Climate Change, our efforts to reduce greenhouse gas emissions have been insufficient to meet that goal by the end of the century.

That kind of bleak outlook has more and more researchers turning to investigate geoengineering as a potential last resort.

Just like particles released by a massive volcano previous eruptions have been shown to lead to dropping temperatures injecting aerosolized sulphur dioxide into the stratosphere could have similar results.

While there's consensus among experts that there's a good chance these particles could actually shade and cool the surface below, we're only starting to understand the possible side effects, particularly on a global scale.

For instance, temperature fluctuations could kick off extreme weather, such as flooding, in unexpected locations around the world. An increase in local reservoirs could even allow for disease like malaria to spread, as *The New Yorker* reports.

Then there's the fact that one country's geoengineering efforts could have vast and potentially disastrous political ramifications as well.

"We believe there's no governance system existing that could decide this, and that none is plausible," Frank Biermann, a political scientist at Utrecht University, told the magazine. "You'd have to take decisions on duration, on the degree and if there are conflicts 'we want a little more here, a little less here'all these need adjudication."

In short, it's a highly contentious idea that simply may not ever get off the ground as it would require everybody to sign off on it.

For instance, the one time scientists actively attempted to try out the idea, it was shut down almost immediately, with activist groups writing a letter that even famous environmentalist Greta Thunberg signed.

Despite the opposition, world leaders are becoming increasingly desperate as they stare down the barrel of a climate catastrophe of unprecedented proportions.

"Geoengineering as a possible solution to this catastrophe will definitely become the only option of last resort if we as a global community continue on the path we have been going," environmentalist Anote Tong, former president of Kiribati, a small island nation that has already been greatly affected by sea level rise, told *The New Yorker*.

B – School of Food and Agricultural Sciences

1: Meal Kit Giant Accused of Using Monkey Labor to Source Coconut Milk

The meal kit subscription service HelloFresh has been accused of using monkey labor — yes, you read that right — to source its coconut milk, per an investigation from an animal rights watchdog group.

As PETA alleges in a press release, the claim is that the trendy delivery company was using monkey labor in Thailand in which the animals were "chained, whipped, beaten, and forced to spend long hours picking coconuts."

It wasn't just a one-off incident, either. PETA claims its investigators visited a whopping 57 operations in Thailand where coconut milk companies that work with HelloFresh forced the animals to work in incredibly dangerous and unsanitary conditions.

Beyond just implicating HelloFresh, PETA is also calling for a boycott of all canned coconut milk products sourced in Thailand "due to the rampant abuse."

"Monkeys are chained around the neck and forced to toil day in and day out, all for HelloFresh and other companies that lack a conscience," PETA Executive Vice President Tracy Reiman said in a statement, adding that the organization "is calling on everyone, including HelloFresh, to stop buying canned coconut milk from Thailand until monkeys are no longer used and abused for profit."

Denial

In a statement to Yahoo, HelloFresh denied PETA's monkey labor accusations, citing written statements from its suppliers.

"HelloFresh strictly condemns any use of monkey labor in its supply chain and we take a hard position of not procuring from suppliers or selling coconut products which have been found to use monkey labor," a spokesperson said. "We have written confirmation from all of our suppliers globally that they do not engage in these practices."

Along with HelloFresh, PETA has also linked Tropicana Oil, the Thai Pure Coconut Company, Edward & Sons Trading Company, and several others to operations that use monkey labor.

2: Divers Growing Veggies in Underwater Greenhouses

Welcome to "Nemo's Garden," a surreal and beautiful underwater garden off of Italy's Northwestern coast.

There, *National Geographic* reports, terrestrial plants are grown in submerged plastic greenhouses dubbed "biospheres," which can be seen glowing from the surface. And we gotta say: the pictures of these plastic, herb-filled oddities are absolutely stunning.

An Italian project, known as Nemo's Garden, is testing the viability of underwater greenhouses https://t.co/Y1PQDM4p3Z

Water Cycle

Sergio Gamberini, the man behind this almost fantastical project, isn't just out to create something that looks beautiful.

He's hoping that his plastic orbs, which rest between 15 and 36 feet below the ocean's surface and hold about 528 gallons of air, will provide a water-conserving, overall sustainable alternative to on-land agricultural operations, particularly helping dry coastal nations grow more food without having to desalinate more water a costly and resource-intensive process. The plants require just a small bit of starter water, but from there, they're self-sustaining. Sunlight heats the submerged spheres, which contain humid air that naturally condenses into freshwater on the walls and drips back into the soil.

"Since the underwater farm needs an external source of water only for the start-up of plants growing," reads the company's site, "our system could be useful for those locations far from the bodies of water available."

Deep Food

Nemo's Garden is still in its earlier phases, but results have been promising. One 2020 study showed that the organization's underwater-grown basil actually had more chlorophyll and antioxidants than land-reared basil a fascinating finding, considering that the water pressure actually forces the Nemo plants to grow a bit differently than they might on the surface.

Excitingly, marine life is reportedly drawn to the glowing orbs as well; according to *NatGeo*, the structures act like an artificial coral reef for nearby species.

Whether Nemo's Garden will one day be coming to a coastline near you remains to be seen. In the meantime, though, we might agree with *NatGeo* photographer Luca Locatelli, who says he's excited to see someone take a well-intentioned leap or perhaps a dive of faith.

"We need someone who thinks about crazy things not only ordinary inventions that are coming out of a real passion," Locatelli told the magazine. "It might be something, it might not, [but] I like the fact that someone is so brave to invest money on such a thing."

3: FDA Gives First Go Ahead for Lab Grown Meat Product

Behold, ethical omnivores: the US Food and Drug Administration (FDA) has given a key go-ahead to what could be the first lab grown meat product bound for human consumption in the US.

The decision, a first for cultivated meat in the US, paves the way for Californian startup Upside Foods to start selling its lab-grown chicken product domestically — meaning that now, it only needs approval from the US Department of Agriculture (USDA) before the ersatz chicken can hit restaurant menus.

"The world is experiencing a food revolution and the [FDA] is committed to supporting innovation in the food supply," FDA officials said in a statement. "The agency evaluated the information submitted by Upside Foods as part of a pre-market consultation for their food made from cultured chicken cells and has no further questions at this time about the firm's safety conclusion."

Upside Foods' products were evaluated via a process in which manufacturers divulge the production process to the agency for review, along with a sample. If everything looks good after inspection, the FDA then sends back a "no further questions" letter to the company.

"We are thrilled at FDA's announcement," said Upside director of communications David Kay in an email to Reuters. "This historic step paves the way for our path to market."

Going Protein

Lab meat like Upside's aren't a plant-based imitation, unlike popular vegan alternatives such as Beyond Burgers. Instead, they're made from real animal cells grown in bioreactors, sparing the lives of actual livestock.

But while at a cellular level the meat may be the same, customers will definitely notice a difference in price. For now, cultivating meat remains an extremely expensive process, so pending USDA approval notwithstanding, it could still be a while before you see it hit the shelves of your local grocer.

To let eager, early customers try out the lab meat, Upside, which already announced its collaboration with Michelin star chef Dominique Crenn last year, will be debuting its chicken at specific upscale restaurants.

"We would want to bring this to people through chefs in the initial stage," CEO Uma Valeti told Wired. "Getting chefs excited about this is a really big deal for us. We want to work with the best partners who know how to cook well, and also give us feedback on what we could do better."

While the FDA's thumbs-up only applies to a specific product of Upside's, it's still a historic decision, signalling a way forward for an industry that's rapidly accruing investment.

C - School of Governance and Society

1: Big Tech Announced More Than 45,000 Layoffs in Recent Months

The tech industry appears to be bearing a disproportionate toll from 2022's economic downturn, with recent and planned layoffs at companies including Twitter, Metaformerly-Facebook, and Intel bringing the total number of sacked tech workers to more than 45,000.

Per an analysis of the numbers following the 11,000-strong layoffs at Meta that CEO Mark Zuckerberg announced this morning, the number of tech workers laid off (or about to be laid off) this year is in excess of 45,500 — even as the economy itself appeared to gain more jobs than expected last month.

While Twitter's layoffs under new owner Elon Musk have garnered ample coverage, huge staff-cutting measures at other companies are leaving their marks as well. To date, the largest single cut is set to take place at Intel, with 20 percent of staff facing the copping block per a report from Bloomberg last month. With more than 120,000 employees, that number would be more than 24,000 — though, to be fair, it hasn't actually happened yet.

As Insider reported at the end of October, these mass layoffs aren't exactly shocking given how earnings across the tech industry have weakened substantially amid this year's economic downturn.

The greatest of these earning losses, of course, have occurred at Meta, where earlier this year, investors eschewing stock broke the industry's record a for single-day selloff.

But of the companies that have laid off large percentages of their workforces so far, it's clear that stock losses predicated the firings, with Intel experiencing a year-long downward trend alongside Lyft, Shopify, Snapchat, and other tech companies that have done layoffs in recent months.

Mass job losses amid economic depression are nothing new, and many of the people getting laid off at these tech companies were already highly-paid and will likely receive competitive severance packages.

Nevertheless, it's a jarring trend — and there's no telling what this will do to the industry as a whole or the job force surrounding it now that it has upwards of 50,000 new people vying for work.

2: A Tesla Executive Under Investigation is Now Working at Spacex For Some Reason

It seems ill-advised to hire an employee who's under investigation at one of your other companies in a ranking position, but then again, Elon Musk is far from an ordinary CEO.

That's on full display as SpaceX hires Tesla's Texas plant lieutenant Omead Afshar, who according to sources close to the matter that spoke to Bloomberg has been brought on as vice president of Starship production.

Over the summer, Afshar — reportedly a close confidante of Musk's — was, as the news site reported at the time, under internal investigation for a sketchy plan he allegedly had to buy difficult-to-source construction materials for Tesla. During the investigation, some of the executive's subordinates were fired. But Afshar himself seems to have had a golden, well, Starship.

It remains unclear whether Afshar is still working at Tesla as well, or if he was shuffled over to SpaceX as a result of his investigation. Sources did, however, tell Bloomberg that he hasn't been seen at Tesla's Austin plant in weeks.

Whether he was moved from Tesla to SpaceX or is working both companies, it wouldn't be the first time for either. Musk sent has shuffled Tesla employees to SpaceX previously and even sent them to Twitter in recent weeks. And as Bloomberg notes, another of his close consiglieres, Charles Keuhmann, is an executive at both companies.

To make this kind of hiring move would be weird enough in a regular context, but the fact that Musk is doing so while wreaking havoc over at his other new company makes it seem all the stranger.

3: Big Tech Announced More Than 45,000 Layoffs in Recent Months

The tech industry appears to be bearing a disproportionate toll from 2022's economic downturn, with recent and planned layoffs at companies including Twitter, Metaformerly-Facebook, and Intel bringing the total number of sacked tech workers to more than 45,000.

Per an analysis of the numbers following the 11,000-strong layoffs at Meta that CEO Mark Zuckerberg announced this morning, the number of tech workers laid off (or about to be laid off) this year is in excess of 45,500 — even as the economy itself appeared to gain more jobs than expected last month.

While Twitter's layoffs under new owner Elon Musk have garnered ample coverage, huge staff-cutting measures at other companies are leaving their marks as well. To date, the largest single cut is set to take place at Intel, with 20 percent of staff facing the copping block per a report from Bloomberg last month. With more than 120,000 employees, that number would be more than 24,000 — though, to be fair, it hasn't actually happened yet.

As Insider reported at the end of October, these mass layoffs aren't exactly shocking given how earnings across the tech industry have weakened substantially amid this year's economic downturn.

The greatest of these earning losses, of course, have occurred at Meta, where earlier this year, investors eschewing stock broke the industry's record a for single-day selloff.

But of the companies that have laid off large percentages of their workforces so far, it's clear that stock losses predicated the firings, with Intel experiencing a year-long downward trend alongside Lyft, Shopify, Snapchat, and other tech companies that have done layoffs in recent months.

Mass job losses amid economic depression are nothing new, and many of the people getting laid off at these tech companies were already highly-paid and will likely receive competitive severance packages.

Nevertheless, it's a jarring trend — and there's no telling what this will do to the industry as a whole or the job force surrounding it now that it has upwards of 50,000 new people vying for work.

4: The Guy Who Invented The World Wide Web Thinks We Should "Ignore" Web3

The man who literally invented the form of the internet we all use believes the future of it lies in decentralization. That man is Tim Berners-Lee, a British computer scientist who's widely credited with inventing the World Wide Web back in 1989.

However, Berners-Lee thinks we should "ignore" proposals to achieve a vaguely defined form of decentralized internet broadly known as "Web3."

The concept of Web3 has been heavily boosted by crypto peddlers who view it almost as a sort of utopia where the internet is driven by blockchain protocols, cryptocurrencies, and NFTs. A lot of the allure derives from its goal of separating the internet from the purview of monopolistic corporations like Google, Microsoft, and Amazon.

But Berners-Lee isn't convinced. In fact, he doesn't think most people even know what Web3 means.

"You have to understand what the terms mean that we're discussing actually mean, beyond the buzzwords," he said at the Web Summit in Lisbon, as quoted by CNBC. "It's a real shame in fact that the actual Web3 name was taken by Ethereum folks for the stuff that they're doing with blockchain. In fact, Web3 is not the web at all."

Too Blocky

According to Berners-Lee, the main problem with Web3 is the blockchain protocols that would power it. As an alternative, he's been working on a decentralized web that doesn't use blockchain at all, called "Solid."

"Blockchain protocols may be good for some things but they're not good for Solid," Berners-Lee said at the summit. "They're too slow, too expensive, and too public. Personal data stores have to be fast, cheap and private."

As for Web3 as a whole? Don't pay it any mind.

"Ignore the Web3 stuff, random Web3 that was built on blockchain," Berners-Lee continued. "We're not using that for Solid."

Fewer Friends

Web3 has its fair share of dedicated proponents, but not even tech CEOs like Elon Musk and Jack Dorsey can fully get on board.

Musk observed in a tweet that Web3 "seems more marketing buzzword than reality right now." Jack Dorsey also opined on his Twitter that Web3 is "ultimately a centralized entity with a different label."

So if even the inventor of the world wide web who wants a decentralized internet can't get behind Web3 either, the concept begins to sound more and more doomed.

5: Elon Musk Denies "False" Reports of Spacex Stock Sale

After reports emerged that serial CEO Elon Musk may be considering a secondary stock sale for his SpaceX rocketry company, the man himself gave a one-word denial.

First reported by *Bloomberg*, the alleged fundraiser would see SpaceX shares sold at around \$85 apiece, would bring the value of the company up to \$150 billion and encourage investors and employees to cash out if any of it's true, that is.

In response to *Bloomberg*'s tweet about the reported plan, though, Musk had just one word: "false."

Seller's Market

To be clear, we don't know exactly what part about the story Musk takes issue with. Is he denying the fundraiser completely, denying how much the stocks would be sold for, or criticizing the potential valuation figure?

News of this will-they, won't-they stock sale comes after a tumultuous few weeks over at Twitter, where Musk promptly fired half the company's staff after taking the helm following the \$44 billion bill of sale.

It's unclear what kind of financial position the business-buyer is in now, but a secondary stock selloff of this sort is, as *Bloomberg* notes, not uncommon during a regular fundraising round.

It's all very confusing, to say the least and the multi-hyphenate owner is not making things any easier.

6: Elon Musk's Wealth Has Plummeted by Over \$100 Billion This Year

Tesla and SpaceX CEO Elon Musk has had a whirlwind of a year.

While SpaceX has made significant progress in developing its Starship rocket capable of returning humans to the Moon, Tesla has had a rough time, with shares plummeting around 52 percent.

That means Musk's net worth has been along for the ride as well, as a big chunk of his wealth is tied up in Tesla. According to the Bloomberg Billionaires Index, Musk's wealth fell over \$100 billion so far this year, the steepest drop of any billionaire to date.

At his peak, Musk was worth around \$340 billion 12 months ago. Now, his net worth has fallen to \$170 billion, which technically still makes him the wealthiest person in the world but other wealthy individuals are starting to make up ground.

Tesla Turmoil

The billionaire CEO holds a 15 percent stake in the electric carmaker. On Monday alone, Tesla's shares tanked, hitting a two-year low and wiping out around \$8.6 billion of Musk's wealth in a single day.

Meanwhile, Musk's disastrous takeover of Twitter has only added to the chaos, with the CEO repeatedly selling billions of dollars' worth of Tesla shares to keep the lights on at the ailing social media company.

Musk has also committed most of his recent time to spreading havoc at Twitter, worrying investors that he has less attention left for his other ventures.

Bad Feeling

Tesla's struggles have been exacerbated by the greater economic slowdown. Musk cut ten percent of the automaker's workforce over the summer, citing a "super bad feeling" about the economy.

Investors have also been worried about Tesla's operations in China, which have had to grapple with the country's strict zero-COVID policies.

Again, despite his car company's woes and a major, self-inflicted Twitter headache Musk remains the wealthiest person in the world. But given the circumstances, one has to wonder how long he'll be able to hold onto that title.

D – Office of Research Innovation and Commercialization (ORIC)

1: Events Organized and Facilitated by ORIC

1.1 Arranged the Collaborating Meeting with the President of Sundar Industrial Estate

The Collaborating Meeting with the President Sundar Industrial Estate was held on Wednesday, November 16, 2022, at 09:30 AM in the DG Board Room, 5th Floor, Admin Building, UMT. The Respected **Prof. Abid HK Shirwani** (Co-Founder, Director-General and Head ORIC-UMT) headed the meeting and welcomed all the participants. The meeting started with the brief introduction, success story and achievements of the **Office of Research Innovation and Commercialization** (**ORIC**), **University of Management and Technology**. The Meeting Participants introduced themselves and shared their great experience with UMT and were thankful for being a part of this meeting. Honorable **Mr. Muhammad Ahmad Khan** (President, Sundar Industrial Estate and CEO, AL-Fattah Group) **Mr. Taufiq Ahmed Shirwani** (CEO, STN Engineering Pvt. Ltd.) and **Maj.(R) Muhammad Arif** (Senior Admin Manager, Sundar Industrial Estate) introduced themselves and explained the brief history of Sundar Industrial Estate. The main **objective** of the meeting was to work on an array of strategies that would help enhance the industry-academia linkages and joint research collaboration.













1.2 Training Program on Web 3.0 and Metaverse on Sunday 6 November, 2022, at University of Management and Technology (UMT).

Office of Research Innovation and Commercialization (ORIC), University of Management and Technology (UMT), in collaboration with The Presidential Initiative for Artificial Intelligence and Computing (PIAIC) arranged a training Program on Web 3.0 and Metaverse at UMT.

The mission of PIAIC is to reshape Pakistan by revolutionizing education, research, and business by adopting the latest, cutting-edge technologies. Experts are calling this the 4th industrial revolution. PIAIC wants Pakistan to become a global hub for Artificial Intelligence (AI), data science, cloud native computing, edge computing, block-chain, augmented reality, and internet of things.

Web 3.0 is the third generation of the evolution of web technologies and is an idea for a new iteration of the World Wide Web, which incorporates concepts such as decentralization, block-chain technologies, and token-based economics.

The training classes for Web 3.0 and Metaverse started from 02 October, 2022 and will be held on every Sunday from, 09:00 AM to 06:00 PM at UMT. More than 1000 plus students enrolled and attended this course.







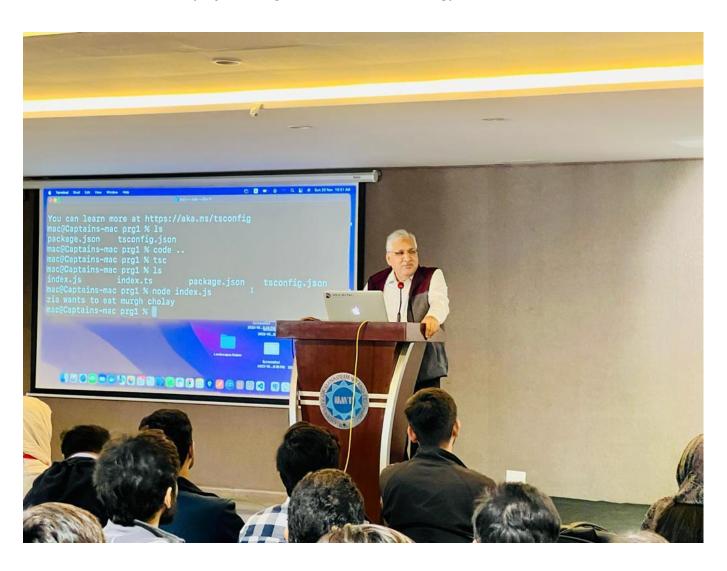
1.3 Training Program on Web 3.0 and Metaverse on Sunday 13 November, 2022, at University of Management and Technology (UMT).







1.4 Training Program on Web 3.0 and Metaverse on Sunday 20 November, 2022, at University of Management and Technology (UMT).

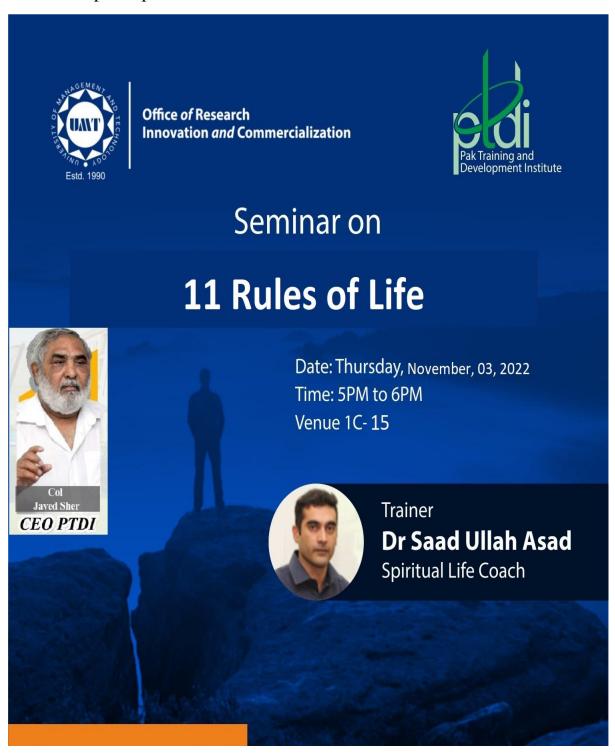






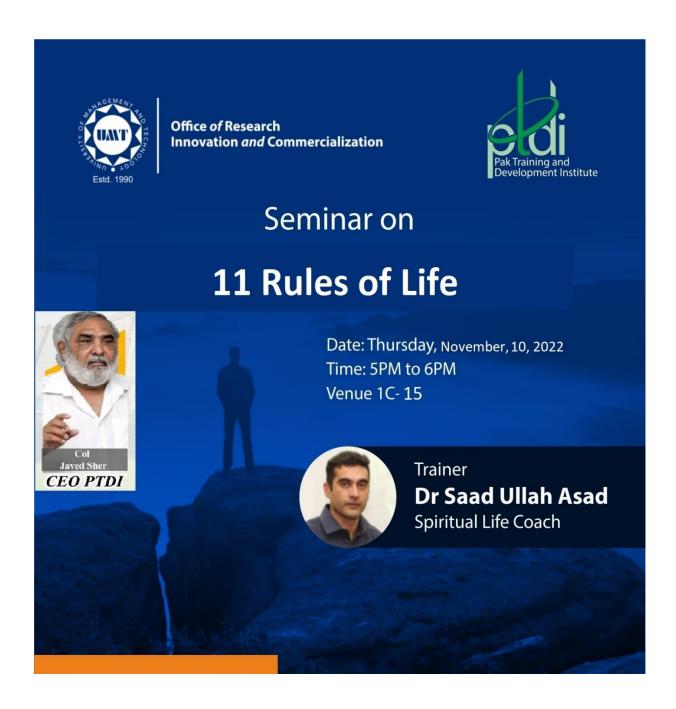
1.5 ORIC organized a free Seminar on "11 Rules of Life"

In collaboration with the Pakistan Training Development Institute (PTDI), ORIC organized a free Seminar on "11 Rules of Life", on Thursday, 03 November 2022. (Guest Speaker: Dr Saad Ullah Asad - Principal CEO at Mindset Consulting Group). Number of participants attended = 40+



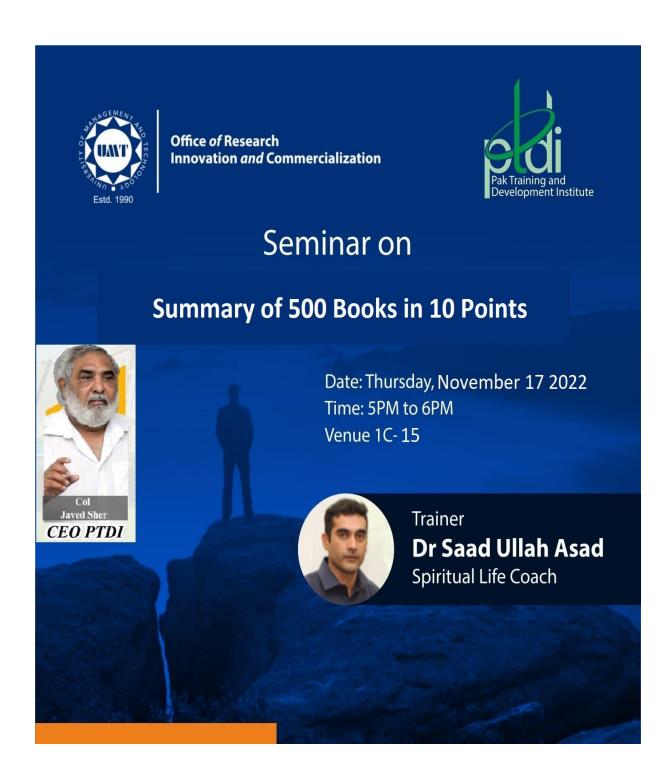
1.6 ORIC organized a free Seminar on "11 Rules of Life"

In collaboration with the Pakistan Training Development Institute (PTDI), ORIC organized a free Seminar on "11 Rules of Life", on Thursday, 10 November 2022. (Guest Speaker: Dr Saad Ullah Asad - Principal CEO at Mindset Consulting Group). Number of participants attended = 40+



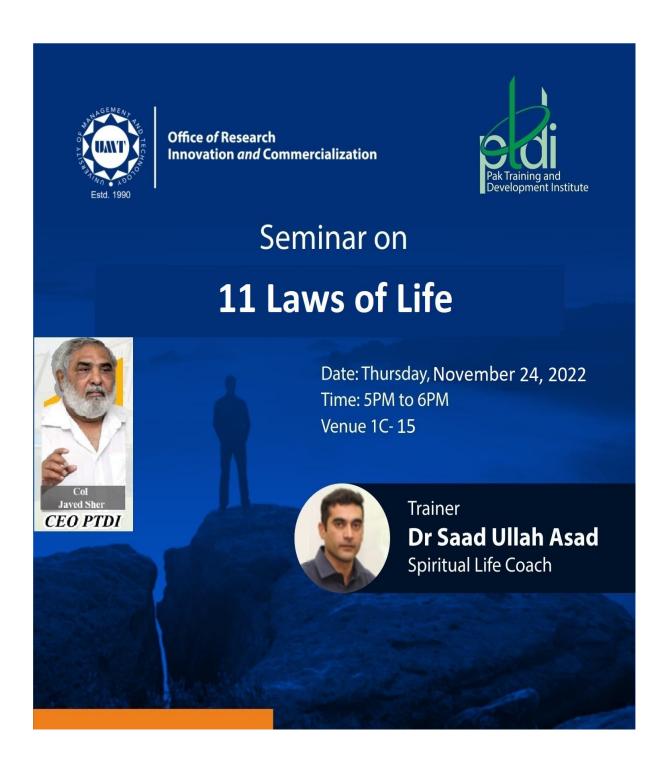
1.7 ORIC organized a free Seminar on "Summary of 500 Books in 10 Points"

In collaboration with the Pakistan Training Development Institute (PTDI), ORIC organized a free Seminar on "Summary of 500 Books in 10 Points", on Thursday, 17 November 2022. (Guest Speaker: Dr Saad Ullah Asad - Principal CEO at Mindset Consulting Group).



1.8 ORIC organized a free Seminar on "11 Laws of Life"

In collaboration with the Pakistan Training Development Institute (PTDI), ORIC organized a free Seminar on "11 Laws of Life", on Thursday, 24 November 2022. (Guest Speaker: Dr Saad Ullah Asad - Principal CEO at Mindset Consulting Group).



1.9 Training Program on Web 3.0 and Metaverse on Sunday 27 November, 2022, at University of Management and Technology (UMT).







2: ORIC-UMT participated PHEC-All Punjab Universities Innovation Expo

ORIC-UMT participated PHEC-All Punjab Universities Innovation Expo at Faletti's on 15 November,2022. The main objective of this expo was to offer a platform for university teachers and students to showcase the projects/start-ups thus promoting innovation and entrepreneurship with a focus on product development and commercialization. The projects list to showcase the projects/start-ups in this expo from the University of Management and Technology were:

Sr. No	Department Name	Project Title	Focal Person
1	Mechanical Engineering	Design, Analysis and Prototype Development of Fire Extinguisher Drone	
2	Electrical Engineering	Next Generation Cognitive Connected Vehicles	Name:
3	Civil Engineering	Safety Management of Construction Projects Using Building Information Modelling	Hood Laeeq Designation: Senior Research Associate CNIC No.
4	Mechanical Engineering	Rapid Prototyping of Prosthetic Foot using Alternative Materials	35202-6176209-9 Contact No. 03207376367
5	Electrical Engineering	Design of an autonomous drone for the Delivery of Organs Utilizing WebRTC	
6	Electrical Engineering	RTL to Silicon: Implementation of lightweight Present crypto-core using open Source Fabrication	
7	Futurizm	Skill Vibe	
8	Futurizm	Achieve Nutrition	
9	Futurizm	Shaista Fitness	
10	Futurizm	Wrap X Code Technologies	

(ERP based Point of sales which manages not only the sales record but also manages the employee record of the designated business







3: 1st Meeting of UMT, PIAIC and Superior Information Systems Incorporation.

1st Meeting of UMT, PIAIC and Superior Information Systems Incorporation was held on Sunday, November 20, 2022 at at 12:00 PM To 1:00 PM in RS Board Room, 1st Floor, Main Building, UMT.

Respected Prof. Abid HK Shirwani (Co-Founder, Director-General and Head ORIC-UMT) headed the meeting and welcomed all the participants. The meeting started with the brief introduction, success story and achievements of the Office of Research Innovation and Commercialization (ORIC), University of Management and Technology. The Meeting Participants introduced themselves and shared their great experience with UMT and were thankful for being a part of this meeting. Honorable Mr. Zia Ullah Khan (Chief Executive Officer – Panacloud and Chief Operating Officer – Presidential Initiative for Artificial Intelligence (PIAIC)) introduced himself and explained the brief history of Metaverse and Cloud Computing. Ms. Sitara Arif (Chief Executive Officer - Superior Information Systems Inc. and Vice President – Pakistan Japan Intellect Forum (PJIF) and Mr. Zakaullah Khan (Chief Technology Officer - Superior Information Systems Inc.) introduced themselves as well as their company and brief about that how they can provide their best facilities to find the best opportunities for students locally and internationally.

The main objective of the meeting was to work together to create a best human resource not only for the Pakistan's market but for internationally as well. Prof. Abid H K Shirwani has given the idea to both parties work together and develop a consortium in which one party plays its role to train the students and the second party find the best opportunities to place the students in different parts of the world specifically in the Japan and Germany.





4: ORIC Attended "Pakistan Japan Diplomatic 70th Anniversary Celebration & Exhibition" on Thursday, 10 November 2022.

ORIC Attended "Pakistan Japan Diplomatic 70th Anniversary Celebration & Exhibition" on Thursday, 10 November 2022 at flatties.







5: Industrial-Academia Collaborating Meeting with the CEO of Roshan Packages Limited

Overview:

The Collaborating Meeting with the CEO of Roshan Packages was held on Wednesday, November 23, 2022, at 11:00 AM in the DG Board Room, 5th Floor, Admin Building, UMT. The meeting started with the recitation of Holy Quran. The Prof. Abid HK Shirwani (Co-Founder, Director-General Head ORIC-UMT) headed the meeting and welcomed all the participants. The Meeting Participants introduced themselves and shared their great experience with UMT and were thankful for being a part of this meeting. Honorable Mr. Tayyab Aijaz (CEO, Roshan Packages Limited), Ms. Shaista Hassan (Advisor to CEO on HR Strategy and Execution, Roshan Packages Limited), and Ms Rija Tayyab (Head of Marketing, Roshan Packages Limited) introduced themselves and explained the brief history of Roshan Packages. The main objective of the meeting was to work on an array of strategies that would help enhance the industry-academia linkages and joint research collaboration. Faculty shared different ideas regarding the problems of the packaging industry then the CEO of Roshan Packages Limited invited the participant to visit to Roshan Packages Limited and put their efforts into the betterment of the existing system. He also said that UMT is the best Institute in Pakistan and he would be glad to collaborate with UMT in Different areas.











