

# EXPLORING THE TOP TECHNOLOGY TRENDS

HOW THE TECHNOLOGY LANDSCAPE IS INNOVATING FOR THE FUTURE  
GLOBAL OUTLOOK

KNOMETRIX MARKET INTELLIGENCE

# CONTENTS

- Predictive Equipment Failure/Maintenance **03**
- Image analysis for medical diagnostics **04**
- Augmented Reality enabled Logistics **05**
- Automated Loan Processing at Banks **06**
- Blockchain Voting System **07**
- Drones for Industrial and Search & Rescue Operations **08**
- Smart Cars and Trucks **09**
- Cloud computing for Online classes **10**
- Online Shopping via Virtual Reality **11**
- Remote Sensing : Crop & Soil Health Monitoring **12**

# Predictive Equipment Failure/Maintenance



- ✓ The products that are coming out of equipment or machinery are often subjected to damages due to the failure in the equipment/machinery and as a result, end up in huge losses for the manufacturers.
- ✓ The data on products and their usage can be fed to an AI machine tool which identifies the failure even before it occurs in the machine thus improving the productivity of the machine and reducing the losses to the manufacturer.
- ✓ Predictive maintenance reduces the frequency of machinery failures, as preventative action can be taken to repair/maintain equipment on a scheduled basis.
- ✓ Machine learning & predictive analytics tools can be used to identify when an equipment would require maintenance service. The data on the current working of the machinery and its full potential working condition will be compared by Machine learning to predict when to provide maintenance to the machine.

## #TechnologyTrend 2

# Image analysis for **medical diagnostics**



- ✓ Even the best physicians can miss small details in an X-ray or a CT Scan. Doctors who are searching for specific conditions from the medical images can sometimes overlook signs of unrelated diseases.
- ✓ Medical imaging has recently taken a drastic change by providing a better understanding of anomalies with the help of machine learning and artificial intelligence.
- ✓ Anomalies which are not visible to the human eye can be identified by AI machine and can provide a wide perspective about the conditions.
- ✓ AI based diagnostic tools are used to analyze the image to improve medical diagnostics results by 90%.
- ✓ Ezra is one of the companies that use an AI tool which helps doctors to identify cancer at early stages through MRI scans, IBM Watson is used to detecting and classifying various medical images under specific medical conditions.

## #TechnologyTrend 3

# Augmented Reality enabled **Logistics**



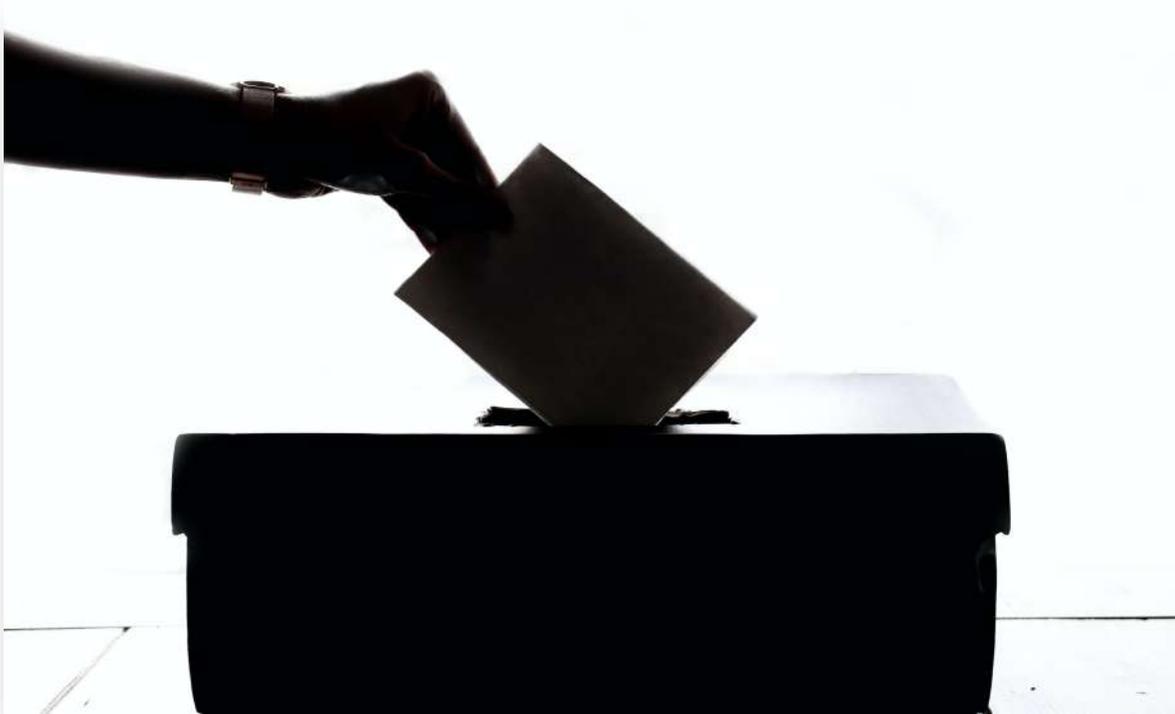
- ✓ Over the past decade, the number of logistic providers using information technologies has increased because they understand that these technologies help in improving efficiency, security and reliability of the freight transport.
- ✓ Augmented reality is one of the technologies that can optimize the logistics in areas such as freight loading, navigation, international trade and completeness check.
- ✓ AR can also help in providing quick pickups. Currently, barcode scanning and manual counting are used which consumes time but with the help of AR in combination with scanners and 3D depth sensors, the pickup can be completed within a few minutes. Another advantage of AR is that it can be used to detect damages.
- ✓ Navigation support provided by AR on the windshield of the delivery vehicle helps in delivering products to customers in time by avoiding traffic and taking alternative routes.
- ✓ Cargo loading can be made effective with the help of AR. Loaders can receive the plan and instruction directly from the AR device

## Automated Loan Processing at Banks



- ✓ Robotic Process automation helps both the customers as well as the banks in improving the loan process and provide new opportunities for growth.
- ✓ Various process such as data entry, task assignments, email notifications automated with RPA will reduce the cost by cutting the overheads for back-office and human errors.
- ✓ Loan processing involves several repetitive Manual processes which are done by staff which can be automated with the help of RPA. Automating Loan process would save time as the number of human errors and the overheads in the back office is drastically reduced.
- ✓ Automation within the enterprise makes it possible to provide customers with portals which are configured and customized based on the need of the customer.
- ✓ Workflow automation makes the lending process faster by collecting data electronically. Automation also helps in tracking the status of loan approval

# Blockchain Voting System



- ✓ Fraud in voting is one of the major issues which is questioning the current voting structure.
- ✓ Voting is one of the main activity which has the option of being carried out. However, voting online has been resisted by many due to concerns such as fraud and security.
- ✓ Blockchain can successfully eliminate the security and fraud concerns as the tamper-proof feature makes it difficult to hack a blockchain-enabled voting system.
- ✓ With the help of blockchain voting system, people need not come to the polling booth to cast their vote which results in a significant rise in voter turnout

## #TechnologyTrend 6

# Drones for Industrial and Search & Rescue Operations



- ✓ Drones application does not stop at cinematography and, Photograph, But these flying devices are also used by oil rig workers to complete full rig inspection quickly, without endangering the life of a worker
- ✓ E commerce companies are looking to deliver goods to the customers front door with the help of drones.
- ✓ Many Nonprofit organizations are making use of drones to monitor deforestation in environmentally fragile communities
- ✓ Other than commercial applications, drones are used for search and rescue missions. These machines help rescue team in quickly locating the victims and map a right path for the rescue mission

## Smart Cars and Trucks



- ✓ One of the readily available application of IoT, AI, ML is smart vehicles
- ✓ Autonomous vehicles is gaining a lot of attention across the world. Various taxi companies such as Uber, Ola are investing in companies which works on Artificial intelligence and take the passengers safely and accurately to the desired destinations.
- ✓ Companies such as Alphabet and Tesla are putting money in the development of IoT connected cars, which not only provide confrontable driving experience but remote garage door opening and manage the speed, location and battery storage of the vehicle

## #TechnologyTrend 8

# Cloud computing for **Online classes**



- ✓ Educational institutions across the world have started using cloud computing for educational purpose.
- ✓ Cloud computing reduces the cost of maintaining an IT infrastructure of educational institutions.
- ✓ Cloud computing enables teachers to take virtual classes and prepare for quizzes and exams.
- ✓ Tech companies are investing a huge sum of money in creating their own learning platform where anyone can learn any course for a small subscription fee.

## Online Shopping via Virtual Reality



- ✓ VR online shopping is an entirely new experience wherein the user can virtually try and buy new items from their home.
- ✓ VR Shopping gives a virtual layout of the store at home and users can select the items they want to buy from the virtual store rack and will be delivered to the customer's doorstep
- ✓ The best part of online VR shopping is that there is no need to worry about the location of store or construction cost.
- ✓ Besides fashion, showrooms are also looking forward to allow shopping online for tools, gears, vehicles etc. Users will be able to go through products specifications and compare with other similar products

## #TechnologyTrend 10

# Remote Sensing : Crop & Soil Health Monitoring



- ✓ Continuous deforestation and degradation of soil quality are some of the challenges faced by farmers.
- ✓ Drones capture the images and videos of the crops and soil. The image and video data are processed through computer vision and deep learning algorithm to give information such as the defects in the plants, health of both soil and crops

# References

1. “10 Best Use Cases to Automate Using RPA in 2019.” Automation Edge, 22 Oct. 2019, [automationedge.com/10-best-use-cases-to-automate-using-rpa-in-2019/](https://automationedge.com/10-best-use-cases-to-automate-using-rpa-in-2019/).
2. “10 Ways Robotic Process Automation Can Improve the Loan Origination Process: Blog.” Nelito, Aug. 2019, [www.nelito.com/blog/10-ways-Robotic-Process-Automation-can-improve-the-Loan-Origination-Process](http://www.nelito.com/blog/10-ways-Robotic-Process-Automation-can-improve-the-Loan-Origination-Process)
3. Bisen, Vikram Singh. “How AI Can Help In Agriculture: Five Applications and Use Cases.” Medium, VSINGHBISEN, 8 Feb. 2020, [medium.com/vsinghbisen/how-ai-can-help-in-agriculture-five-applications-and-use-cases](https://medium.com/vsinghbisen/how-ai-can-help-in-agriculture-five-applications-and-use-cases)
4. Buttice, Claudio. “Top 20 AI Use Cases: Artificial Intelligence in Healthcare.” Techopedia.com, [www.techopedia.com/top-20-ai-use-cases-artificial-intelligence-in-healthcare/2/34047](http://www.techopedia.com/top-20-ai-use-cases-artificial-intelligence-in-healthcare/2/34047)
5. “Global: English.” DHL, [www.dhl.com/](http://www.dhl.com/)
6. Gupta, Jyoti. “Top 5 Business Use Cases For Virtual Reality in 2019.” Quytech , 13 Dec. 2019, [www.quytech.com/blog/5-ways-businesses-are-using-virtual-reality-right-now/](http://www.quytech.com/blog/5-ways-businesses-are-using-virtual-reality-right-now/)
7. Hasan, Mehedi. “Top 20 Best Cloud Computing Examples and Uses in 2020.” *UbuntuPIT*, 17 Apr. 2020, [www.ubuntupit.com/best-cloud-computing-examples-and-uses/](http://www.ubuntupit.com/best-cloud-computing-examples-and-uses/)
8. “A Revolution: 10 Use Cases of Artificial Intelligence in Healthcare.” *Information Age*, 22 Aug. 2019, [www.information-age.com/10-use-cases-artificial-intelligence-healthcare-123484205/](http://www.information-age.com/10-use-cases-artificial-intelligence-healthcare-123484205/)
9. Stokes, Paul. “10 Amazing Cases of IoT Applications Taken from the Real Life.” *Medium*, Data Driven Investor, 29 Oct. 2018, [medium.com/datadriveninvestor/10-amazing-cases-of-iot-applications-taken-from-the-real-life-a8682cdb48d0](https://medium.com/datadriveninvestor/10-amazing-cases-of-iot-applications-taken-from-the-real-life-a8682cdb48d0).
10. “Top 25 Disruptive Augmented Reality Use Cases.” *Mantra Labs*, 16 Oct. 2019, [www.mantralabsglobal.com/blog/disruptive-augmented-reality-use-cases/](http://www.mantralabsglobal.com/blog/disruptive-augmented-reality-use-cases/)
11. “Top 5 Use Cases For Machine Learning in The Enterprise.” *FileCloud*, 8 Dec. 2019, [www.getfilecloud.com/blog/2018/08/top-5-use-cases-for-machine-learning-in-the-enterprise](http://www.getfilecloud.com/blog/2018/08/top-5-use-cases-for-machine-learning-in-the-enterprise).

# GET IN TOUCH WITH US

Let us work together to create long lasting impact

Knometrix Technologies Private Limited  
616, Oxford Towers, Kodihalli,  
Old Airport Road, Bangalore 560008  
[www.knometrix.com](http://www.knometrix.com)  
[info@knometrix.com](mailto:info@knometrix.com)

We are a global Market Intelligence and Data Analytics company.

Copyright © Knometrix 2020 – All rights, including copyright, in the content of our webpages and publications (including, but not limited to, our reports and blog posts) are owned and controlled by Knometrix Technologies Private Limited. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

