
Business Application – Acquisition, Development & Implementation

(Chapter - 5 : DISSA Course) Part 3

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Query – 03/07/2021

- *IS audit or internal audit work allotment by head of company and report is also given to HOD, how auditor independence retain. due to again assignment taken from HOD. Is there any work allotment policy for reappointment of IS auditor or internal auditor?*
- **Response**
- *Appointment may come from management*
- *Internal Audit reports nowadays – directly to BOD / Audit Committee*
- *Report summary submission / Presentation often made to BOD / AC*
- *If Report has good coverage, positive & technical recommendations = value addition , eventual reappointment*
- **Banks :**
- *RBI periodic inspection of IS Audit Reports (RBS)*
- **Insurance :**
- *Similar policy from IRDA*
- *7/6/2021
Empanelment valid – usually 2 or 3 years*

Inadvertent Data leak on IBBI website – June 26 2021

- IBBI portal leaked ‘by mistake’ PAN -AADHAR data of workmen of many companies
- **Background**
- Order passed December 2018 : Allahabad bench of NCLT had directed an IRP to publish list of creditors on corporate debtor's website.
- *"... IRP is directed to publish the list of the creditors containing the names of the creditors along with the amount claimed by them, the amount of their claims admitted and the security interest, if any, on the website of the corporate debtor," NCLT bench*

Data on IBBI website

- IBBI "inadvertently" put on its website Aadhaar & PAN details of creditors, including workmen, of some companies undergoing CIRP
- **No clear data** : no of creditors whose data were put up
- **No official comment** from IBBI.
- IBC : Such details to be put out on websites of CD
- *Since small companies do not have / unable to maintain websites, IBBI working on project to host these details on its website for easy access*
- **Possible reason**
- Details about creditors, - Aadhaar & PAN, were submitted in PDF format.
- IBBI officials may have faced difficulty to remove specific details from PDF files, Aadhaar & PAN information of many people were inadvertently made available on IBBI website
- Subsequently, such data removed / offloaded from IBBI website

Password Protecting Word File

- 1. Open Word file.
- 2. Go to the **File menu**. --- 'Prepare option' – 'Encrypt document' – enter PW 2 times
- Or
- 3. Click on **Protect document**.
- 4. Go to **Encrypt with password**.
- 5. Enter the **password**.
- 6. Re-enter the same password again.
- Word file is password protected. (Please remember / document PW)
- **PDF**
 1. Open document
 2. Select –'file ' option
 3. Drop down box
 4. Option comes – "password protect"

Password Protect PDF Document with Microsoft Word

- Create document or open an existing PDF document using Microsoft Word.
- Click **File** menu & select the **Save As** tab. Browse to a location where you would like to save PDF file.
- In the Save As dialog box that appears, select **PDF (*.pdf)** from the **Save as type:** drop-down box.
- Click **Options** button at the bottom
- At bottom of the Options window, check box next to “**Encrypt the document with a password**” and then click **OK**.
- Enter the password you want to encrypt PDF file twice & click **OK**.
- Enter a name for PDF file & click **Save** button.
- On opening the PDF file with Adobe Reader user is prompted to enter the document open password before viewing / editing

R Ltd

Sector = Electronics / Defence, SAP ERP

- **Production Planning & Material Management modules of SAP (PP, MM)**
- **IS Audit Report= Executive Summary**
- Users resorted to manual process due to lack of proper training & non-utilisation of available provisions.
- Audit Information System module not implemented
- IT policy including IS policy still under preparation
- Log files of access control device not maintained & not monitored.
- Password policy & data classification not prepared.
- Offsite storage of backup data not established

B Ltd

Sector = Power , SAP ERP

- IS Audit on implementation of ***Fuel Management Process Module*** (FMPPM) under SAP-ERP System
- 1. **Non-preparation of SRS and URS & absence of IS Policy** (User/system Requirement Specification)
- 2. Inadequate ***Interfacing of prevailing IT solutions with SAP-ERP System***- E-Tendering & WB application S/W (Weigh Bridge Tech Software)
- 3. ***Generation of reports through legacy software***
- **Risk** = repetition of efforts in maintenance of data in different format
- **Receipt of foreign material (other than stones)**
- No mechanism in ERP to capture = weights of foreign material (other than stones) received with coal.
- **Risk** = no claims raised against coal companies either through System or otherwise

ITGC

- ***Inadequate SOD***
- ***Inadequate Training of Core IT Teams*** (functions ,T Codes, reports)
- ***Non-updation of User Manuals-*** certain Reports pertaining to FMPM though generated through SAP not mentioned in SAP Handbook
- ***Weakness : Logical Access Controls***
- Auditee adopted password policy ,
- Password Policy parameters - length of password, periodicity of passwords, etc. not been strictly adhered to.
- No of days for change of System level, User level & other passwords defined - 15 days, 30 days & 60 days respectively in Password Policy – but found non-functional in FMPM.
- 3,500 users using their initial passwords

M Ltd - Sector – Oil & Gas, SAP- ERP

- SAP System : 3 tier client/server Architecture.
- Data stored – database layer, data processed in application layer
- SAP GUI frontend (presentation layer) = user interface . 3 layers connected
- **IS Audit Report observations**
- BCP & DRP not formulated even after 5 years of ERP implementation.
- **MM module - IS Audit observations**
- ✓ PO issued without PR. (approx 1000 PO / year, value =INR 450 Cr)
- ✓ PO issued without delivery dates. (approx 700 PO , value = INR 230 Cr)
- ✓ Delays in posting of goods issued & receipt document
- **Financial Accounting & Controlling (FICO) module**
- ✓ Auditee not monitoring defaulting consumers & BG renewals in system.
- ✓ SAP system did not provide updated information on o/s BG
- ✓ Physical verification of assets not updated in SAP.
- ✓ Auditee = no password policy since inception.



Controller of Certifying Authorities

- **IS AUDITORS PANEL**

- **M. Kuppuswamy P S G & Co LLP , Chartered Accountants:**

Chennai-600 018,

- **Kochar & Associates , Chartered Accountants, Mumbai-400028.**

- **AAA Technology Pvt. Ltd., 278-280, Powai, Andheri (E), Mumbai-400072.**

- **PricewaterhouseCoopers (PWC) Private Ltd. DLF Cyber City, Gurgaon, Haryana-122002**

- **AKS Information Technology Services Pvt. Ltd. Noida-201309 (U.P.), India**

- **Yoganandh & Ram , Chartered Accountants, Velachery, Chennai-600042.**

- **Sysman Computers (P) Ltd. Sion, Mumbai-400022.**

- **CyberQ Consulting Pvt. Ltd, New Delhi-110019**

- **Digital Age Strategies Pvt. Ltd. Corporate Office: Bangalore-560076.**

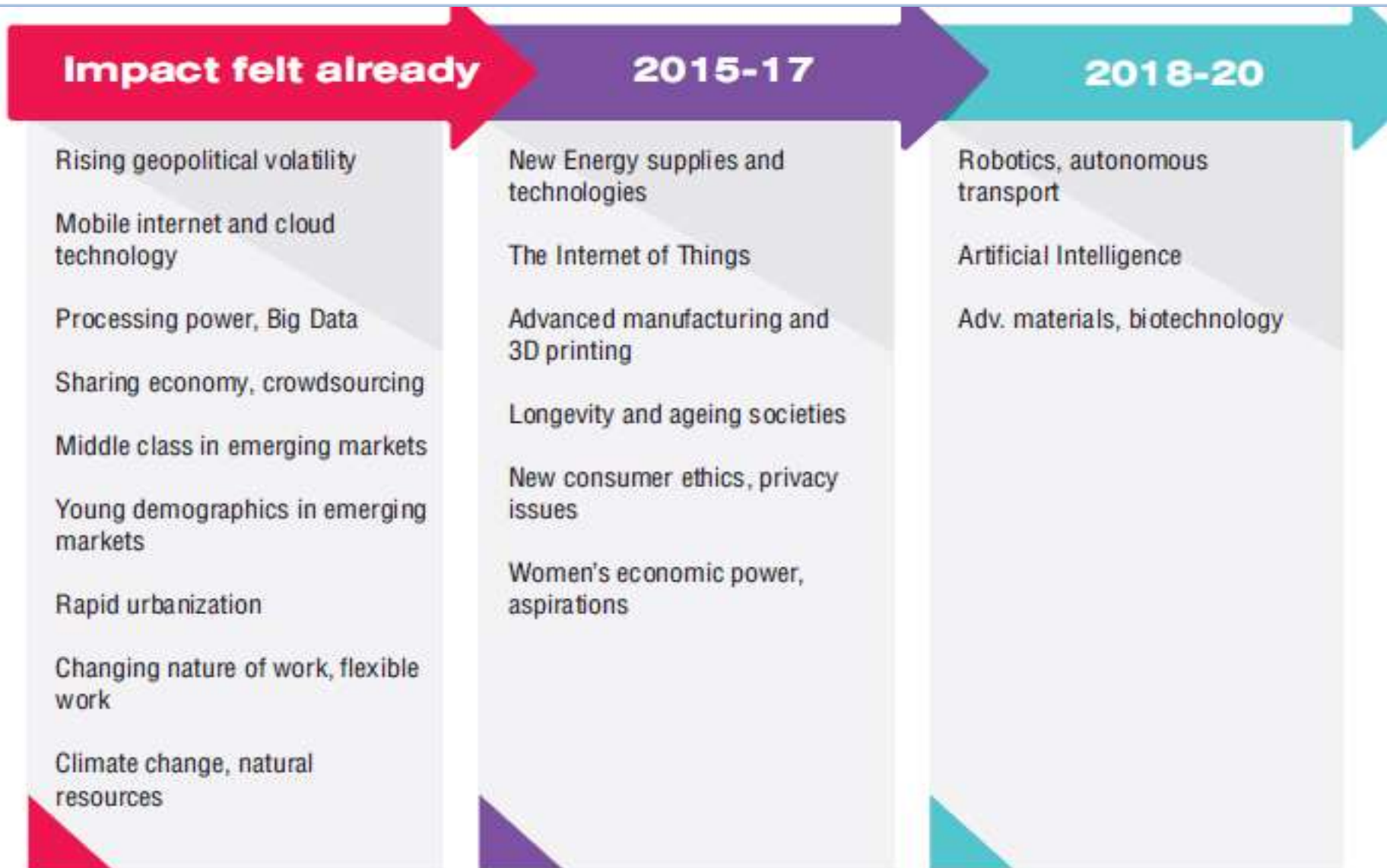
IT Hardware & Software acquisition

	Advantages	Disadvantages
Buying	<ul style="list-style-type: none"> • Cheaper than leasing or renting over the long run. • Ability to change system. • Provides tax advantages of accelerated depreciation. • Full control. 	<ul style="list-style-type: none"> • Initial cost is high. • Risk of obsolescence. • Risk of being stuck if choice was wrong. • Full responsibility.
Leasing	<ul style="list-style-type: none"> • No capital is tied up. • No financing is required. • Leases are lower than rental payments. 	<ul style="list-style-type: none"> • Company doesn't own the system when lease expires. • Usually, a heavy penalty for terminating the lease. • Leases are more expensive than buying.
Renting	<ul style="list-style-type: none"> • No capital is tied up. • No financing is required. • Easy to change systems • Maintenance and insurance are usually included. 	<ul style="list-style-type: none"> • Company doesn't own the computer. • Cost is very high because vendor assumes the risk (most expensive option).

Vendor support

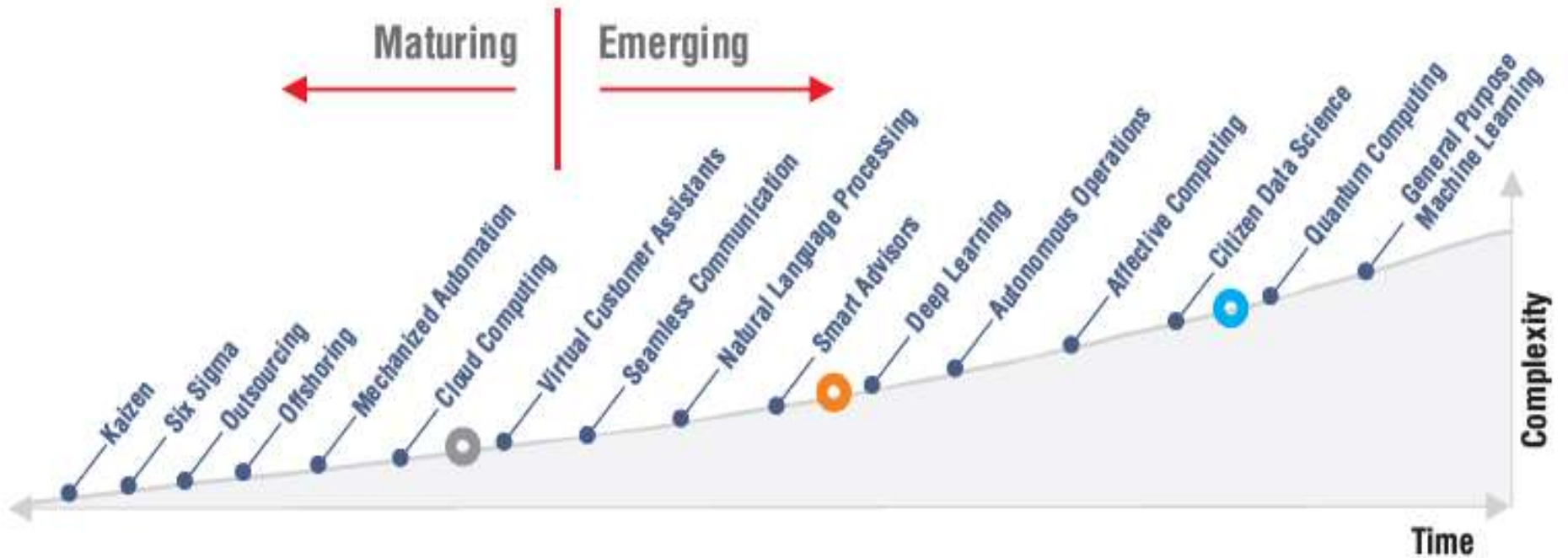
Vendor Services	Specifics Vendors Typically Offer
Hardware Support	<ul style="list-style-type: none">• Full line of hardware.• Quality products.• Warranty.
Software Support	<ul style="list-style-type: none">• Complete software needs.• Custom programming.• Warranty.
Installation and Training	<ul style="list-style-type: none">• Commitment to schedule.• In-house training.• Technical assistance.
Maintenance	<ul style="list-style-type: none">• Routine maintenance procedures.• Specified response time in emergencies.• Equipment loan while repair is being done.

Changing business models



Source: Future of Jobs Report, World Economic Forum

Maturing vs Emerging



Data Analytics

- DA = *examining the data available to draw conclusions*
- **Data analytics : Ability**
- to identify new opportunities,
- to harness costs savings
- to enable faster more effective decision making
- to identify potential for new products & services
- to detect potential loss of clients - in order to direct efforts to encourage them to stay

Data Sources

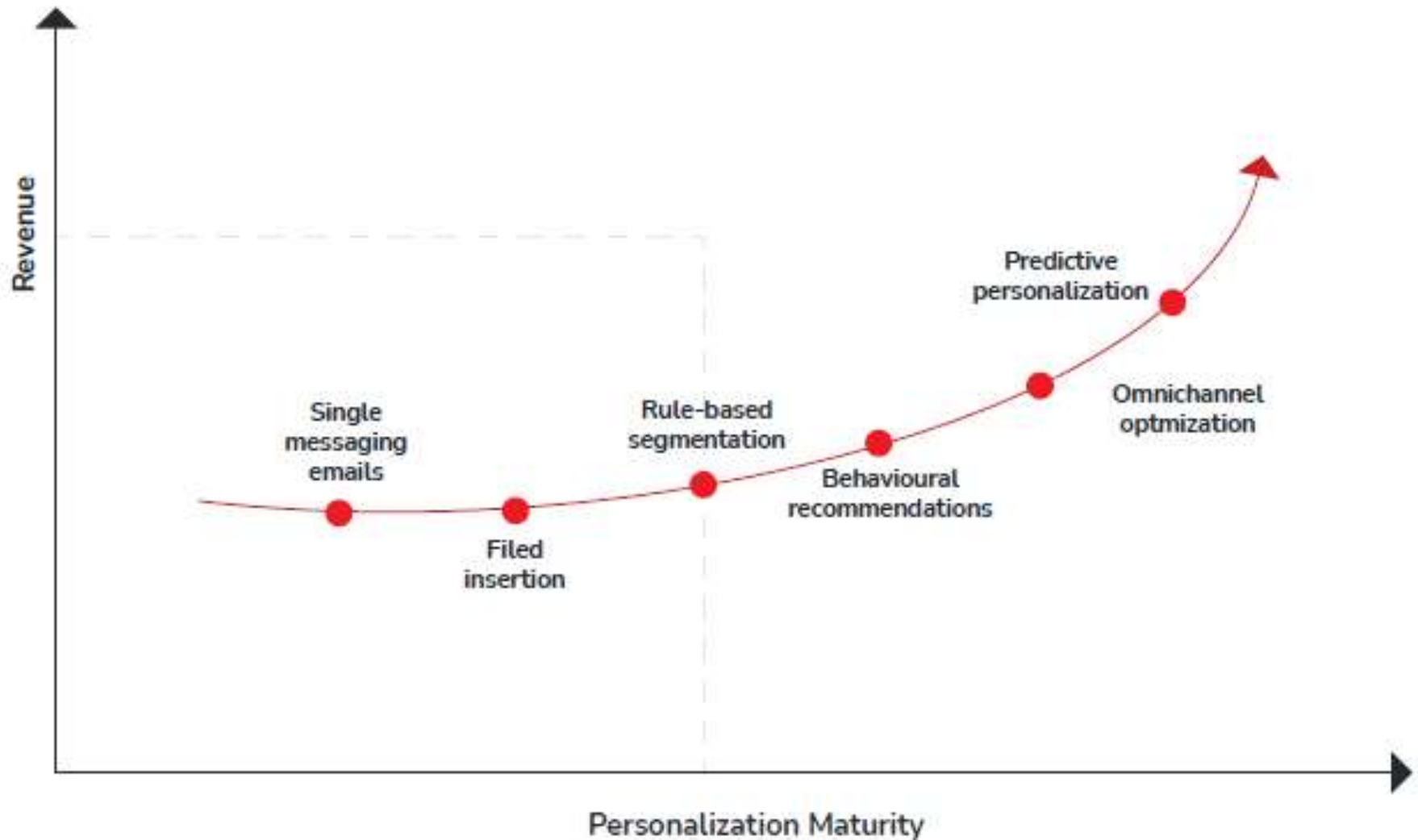
- both internal & external
- Include quantitative & qualitative data.
- aided by specialised software developed
- enable information from many different sources & formats to be combined & analysed

Uses of Data Analytics:

- ✓ KPI from underlying data
- ✓ statistical interrogation of scientific results to test hypotheses.
- ✓ to predict market trends
- ✓ to influence consumer behaviour
- ✓ Data mining of customer feedback for repeated common phrases
- ✓ Voice pattern recognition -used to identify areas of customer dissatisfaction
- ✓ to identify repeat frauds : regions / countries/ sectors

Business / revenue driver

Revenue vs. Personalization maturity curve



Benefits of Data Analytics

- Increased business understanding through a more thorough analysis of a client's data
- Use of visual output
- Better focus on risk
- Increased consistency across group audits
- Increased fraud detection

CAAT Audit Working Papers:

- **(a) Planning:**
 - (i) CAAT objectives, duly defined in clear terms.
 - (ii) Specific CAAT to be used considering audit area & its nature & volume.
 - (iii) Controls in test runs & final runs with reference to data files, etc.
 - (iv) Staffing, timing and cost.
- **(b) Execution:**
 - (i) CAAT preparation & testing procedures and controls.
 - (ii) Details of tests performed by CAAT.
 - (iii) Details of input, processing & output
- **(c) Cost Audit Evidence:**
 - (i) Output provided.
 - (ii) Audit conclusions.
- **(d) Others:**
 - Recommendations to the management.

IoT

- system of interrelated computing devices, mechanical & digital machines, objects, animals or people provided with unique identifiers (UIDs) & ability to transfer data over network without human-to-human or human-to-computer interaction.
- Thing - can be:
 - ✓ person with heart monitor implant,
 - ✓ farm animal with a biochip transponder,
 - ✓ automobile with built-in sensors to alert driver – low tire pressure
- **IoT ecosystem** - web-enabled smart devices use embedded systems - processors, sensors & communication hardware to collect, send & act on data they acquire from their environments
- IoT use AI & ML aid - make data collecting process easier
 1. IoT input = sensor / antenna / microcontroller
 2. IoT - Process, collate & data transfer – via IoT gateway / hub
 3. IoT Interface= smartphone , CRM dashboards , ERP

IoT – Benefits

- ✓ monitor overall business processes;
- ✓ improve customer experience (CX);
- ✓ save time & money; higher revenue.
- ✓ enhance employee productivity;
- ✓ integrate & adapt business models;
- ✓ make better business decisions;
- **Disadvantages of IoT :**
- Rising no of connected devices & more information b/w devices, = hacking
- Enterprises to eventually deal with millions -- of IoT devices - collecting & managing data from all such devices will be challenging.
- Bug in system = every connected device will become corrupted.
- No standard of compatibility for IoT, = difficult in interoperability
- **Ex : Precision agriculture** – water, fertiliser, pesticide : AI & IoT- remote sensing, GPS,GIS, Soil, p H, temp,weather , crop type: *use robot/ drone*

Eemerging IoT standards

- IPv6 over Low-Power Wireless Personal Area Networks- enables any low-power radio to communicate to internet
- OneM2M is machine-to-machine service layer that can be embedded in software & hardware to connect devices.
- Long Range Wide Area Network (LoRaWAN) = protocol for WANs designed to support huge networks, -smart cities, with millions of low-power devices.
- **Examples**
- **Amazon Web Services (AWS) IoT** = cloud computing platform for IoT
- **Microsoft's Azure IoT Suite** = platform consists of set of services - enables users to interact with & receive data from their IoT devices
- **Google's Brillo/Weave** = platform for rapid implementation of IoT applications

IoT: Wearable Devices – IS Security

- The wearables in use :
 - ❑ smart watches,
 - ❑ smart glasses,
 - ❑ hearables,
 - ❑ fitness and health trackers,
 - ❑ smart jewellery , smart clothing
- offer convenient and fun platforms with displaying notifications,
- controlling media libraries,
- accessing personal verbal assistants, track workouts,
- check emails, etc. - powered by microprocessors & ability to send & receive data via Internet.

IoT Technology

- **Why 'smart'?**
 - Sense and translate data;
 - Collect and prepare data for transmission; and/or
 - Transmit data to off-site storage for processing and reporting
 - **Risk**
1. Employee's **watch connected to personal mobile device** that in turn has access to **company's LAN** where sensitive financial & customer information is stored
 2. **Easy Physical Access to Data- no biometric / encryption**
 3. **Ability to Capture Photos, Videos and Audio**
 4. **Insecure Wireless Connectivity**

RPA Definition

Robotic Process Automation (RPA) = innovative solution **for fully automatic handling of business processes** with high volume & repetitive nature

- **RPA = integrated in existing IT infrastructure**
- Software robot = access to diverse applications with ID / password.
- Robot can gather information / change data.
- **Result** - Automation of business processes

“An application of technology that allows employees in a company to configure computer software, or a 'robot', to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems”.

- The Institute for Robotic Process Automation (IRPA)

Benefits of RPA

- **Saving potentials: 20- 35 %**
- Audit trail - Fully maintained logs essential for Compliance
- Low Risk Non-invasive technology
- Reliability - No sick days, services, provided 365 *24
- Accuracy
- AI – ***advanced form*** of RPA