COAT 2019

The Digital Future of Tribunals

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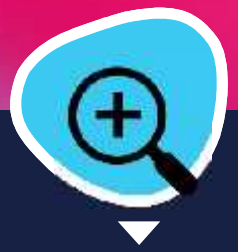
Newcastle Law School

Change »

Three Levels of Change

Mainly lower levels of change for the next 5-10 years



Supportive Technology

Technology is assisting to inform, support and advise people involved in justice activities. Remote conferences, vid hearings, apps, websites, info, e – forms, justice café.

Replacement Technology

Technology is replacing functions and activities that were previously carried out by humans. Case management, letters, listing, sharing, TDRS, ODR, Modria add ons. See BC. Apps again!

Disruptive Technology

Technology is changing the way that determinative, advisory and facilitative processes work and informing system reform through the use of big data sets and more complex knowledge generation. AI and analytics. Apps again!

Introduction

Connectivity

More connected devices than toilets

What is Driving Change?

The Digital Age

We are more connected than ever before…

Large percentage of population are on line – all the time

Scope and potential for EDR and related ODR in modern online environment

EDR and ODR are being used in a wider range of disputes

Significant obstacles in justice reform

What happens when judicial reform 'clashes' with disruptive technology?

Rapid changes in service delivery (e.g. Uber) gives rise to unexpected results

UK reforms, BC reforms, Productivity Commission

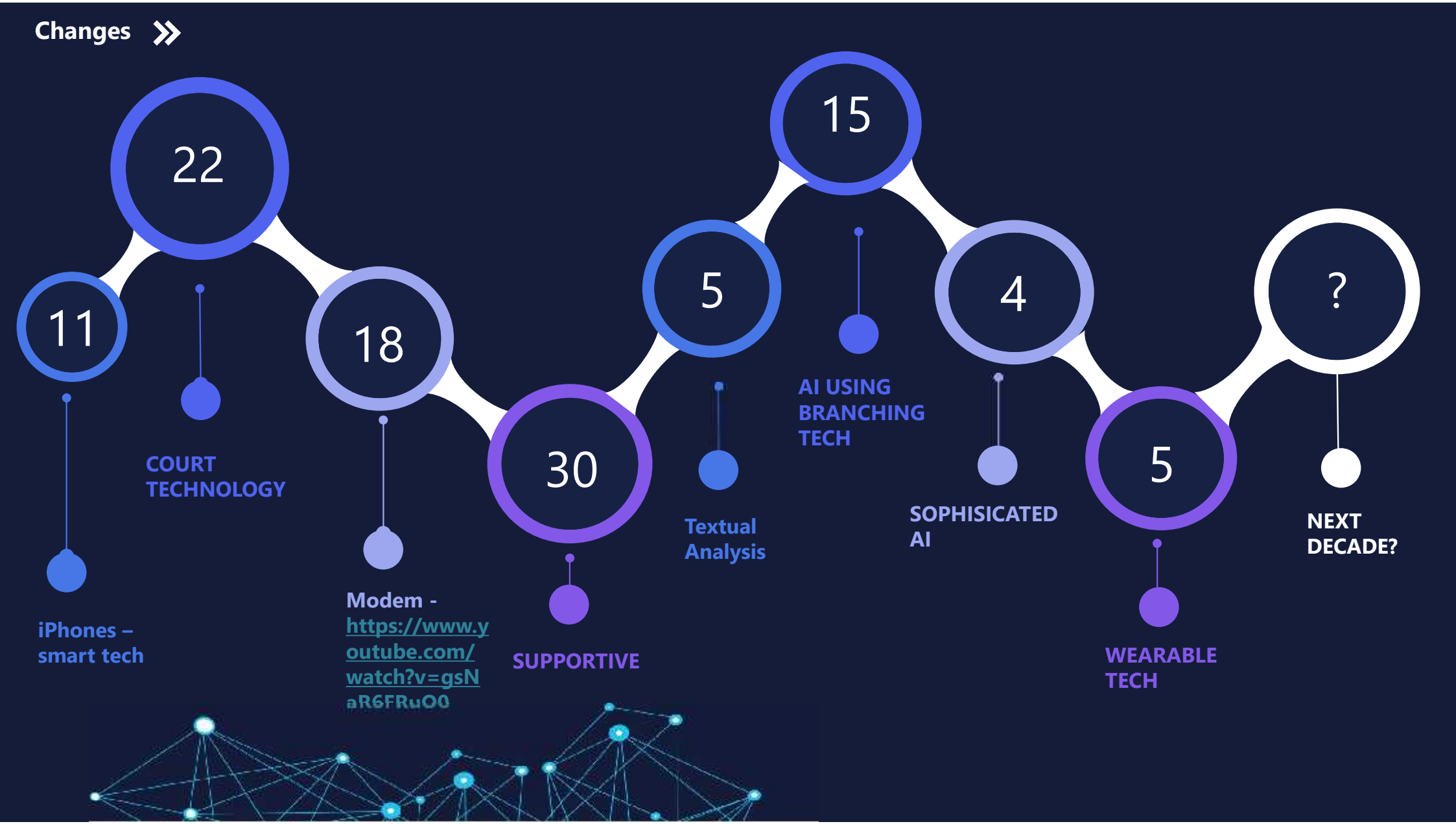
Need for Reform

How will tribunal processes change in the era of technological disruption?

Changes

My first computer

Osborne


Changes
11
22
18
30
5
15
4
5
?
iPhones – smart tech
COURT TECHNOLOGY
Modem - https://www.youtube.com/watch?v=gsNaR6FRuO0
SUPPORTIVE
Textual Analysis
AI USING BRANCHING TECH
SOPHISICATED AI
WEARABLE TECH
NEXT DECADE?

Not so good Technology Decisions – Yahoo!

YAHOO!

2016
Yahoo accepts a $4.48 Billion purchase from Verizon.

2008
Microsoft makes a $40 Billion offer to buy Yahoo and Yahoo declines.

2002
Realises their mistake and offers $3 Billion. Does not acquire for $5 Billion (Google now worth $200 Billion)

1998
Chooses not to acquire Google for $1 million.

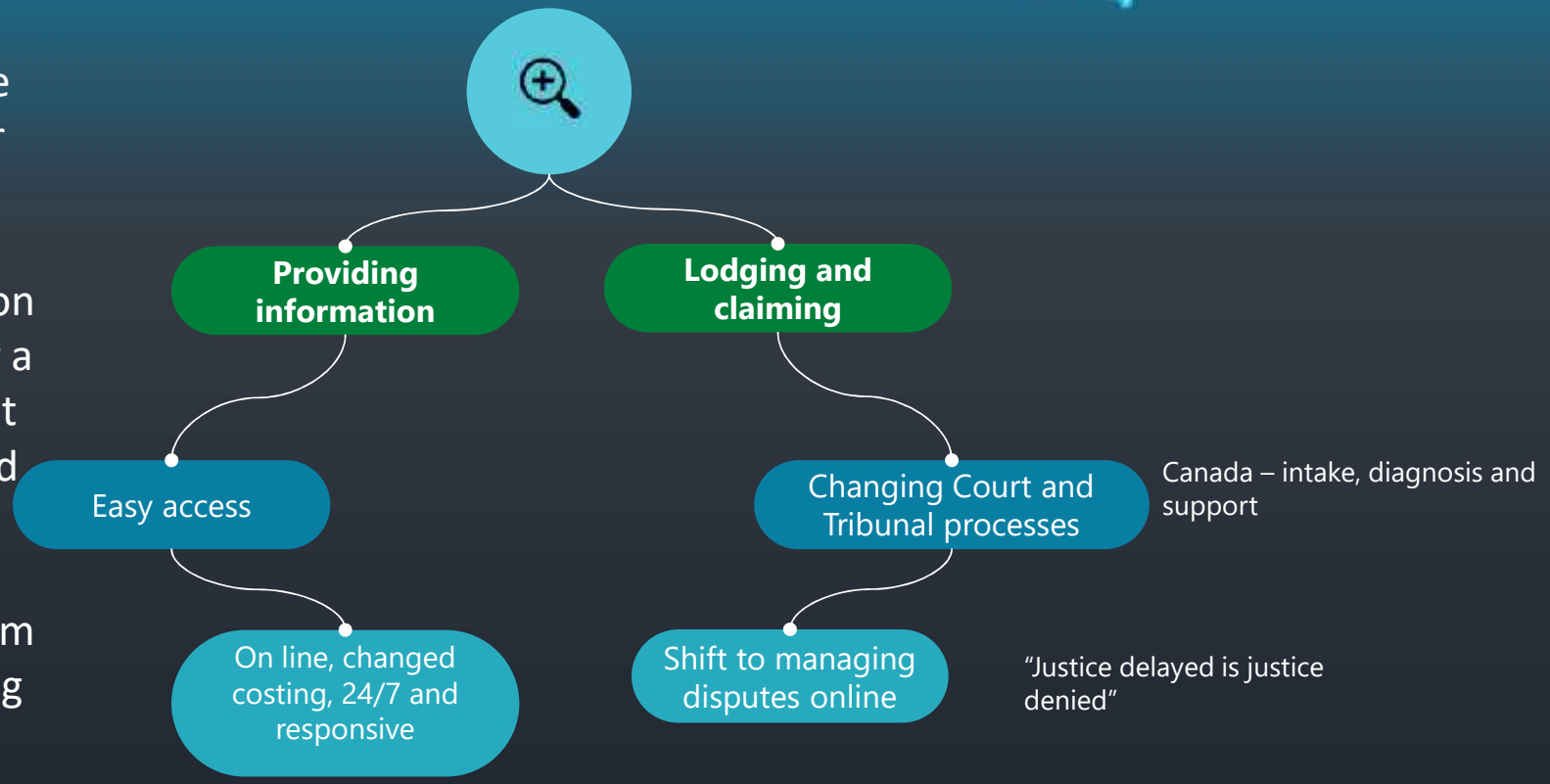
Google

Supportive Technology

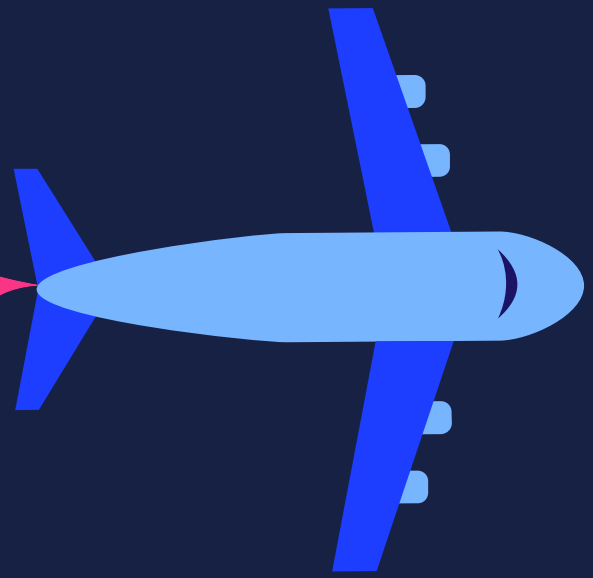
Low level changes for the next 5-10 years

Five years ago, entrepreneur Charley Moore founded online legal services provider Rocket Lawyer.

It now boasts 30 million users. Subscribers pay a monthly fee for instant access to pre-prepared documents and tutorials, as well as online legal advice from experts at participating firms



No need to travel



Second Level of Change

Replacement Technologies

Significant Growth

Large Scale ODR

Modria – More than a billion disputes (Tyler – Modria). Chatbot plus systems.
Virtual assistant to bot.

E-Courts & E-Arbitration

US, Canada and UK.
Sometimes linked with the big providers.
HMOC.
E Discovery

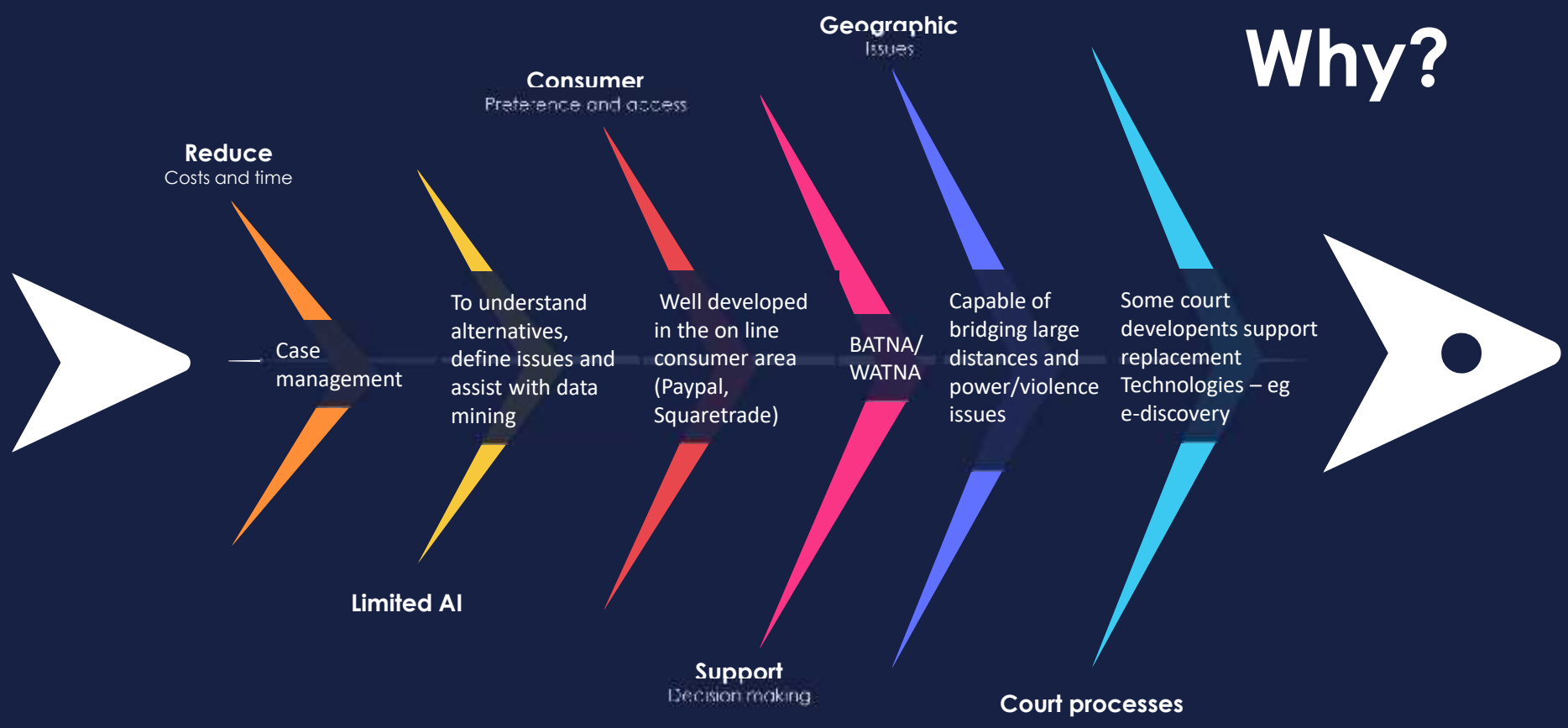
Boutique Providers

Guided Resolution - Adieu (Queensland)
Apps, apps and more apps

Govt Initiatives

Eg, EU changes rolled out from the beginning of 2016

Second Level of Change



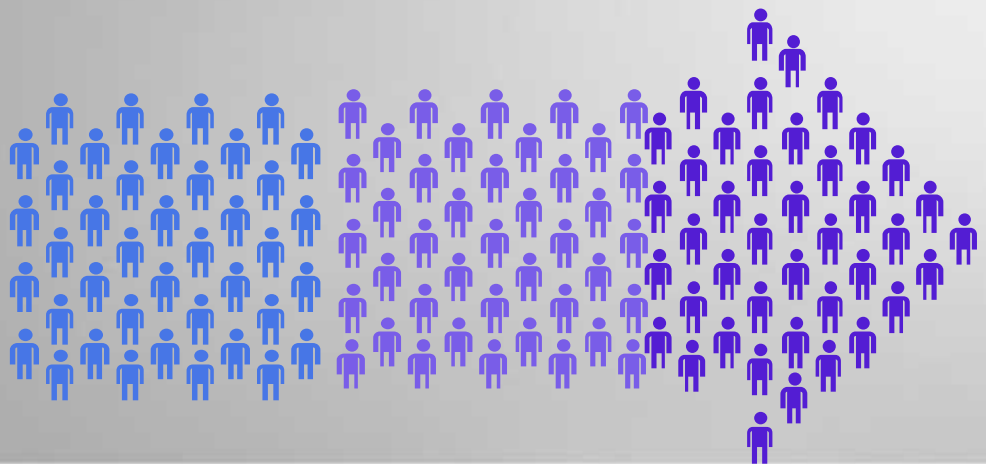
Second Level of Change

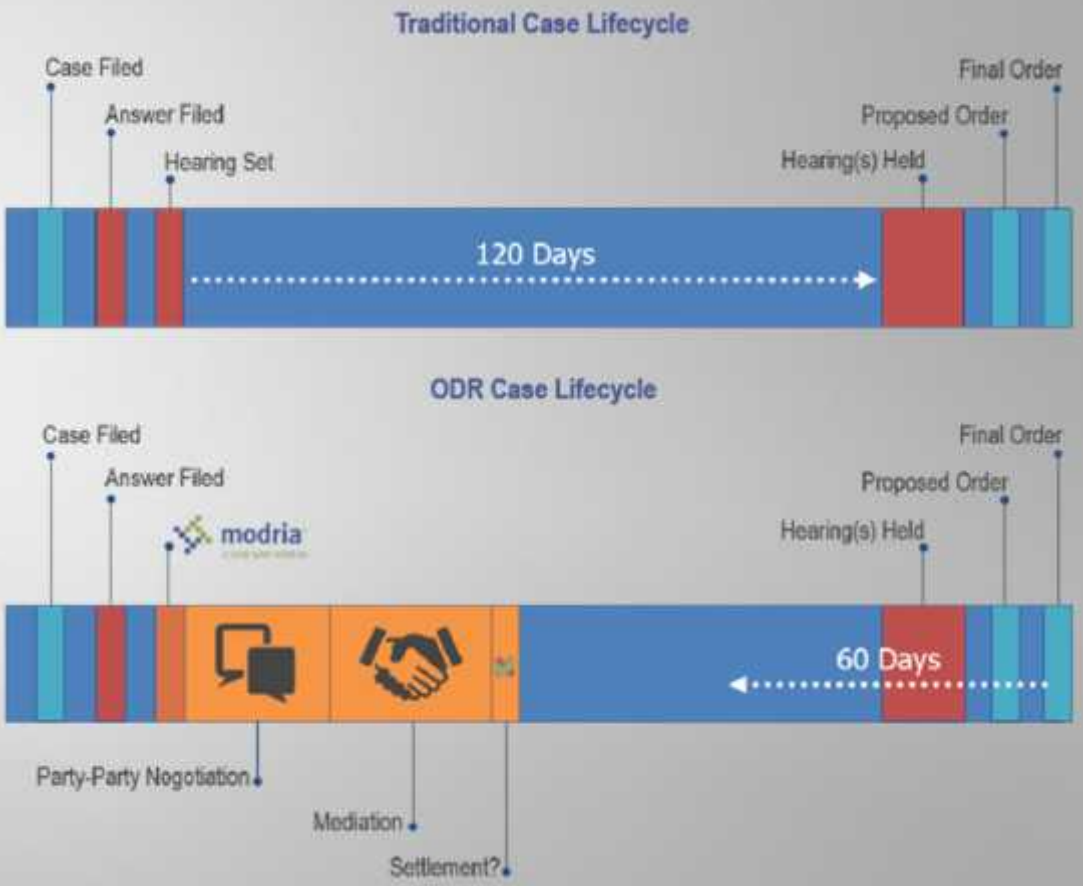
The Future of Dispute Resolution

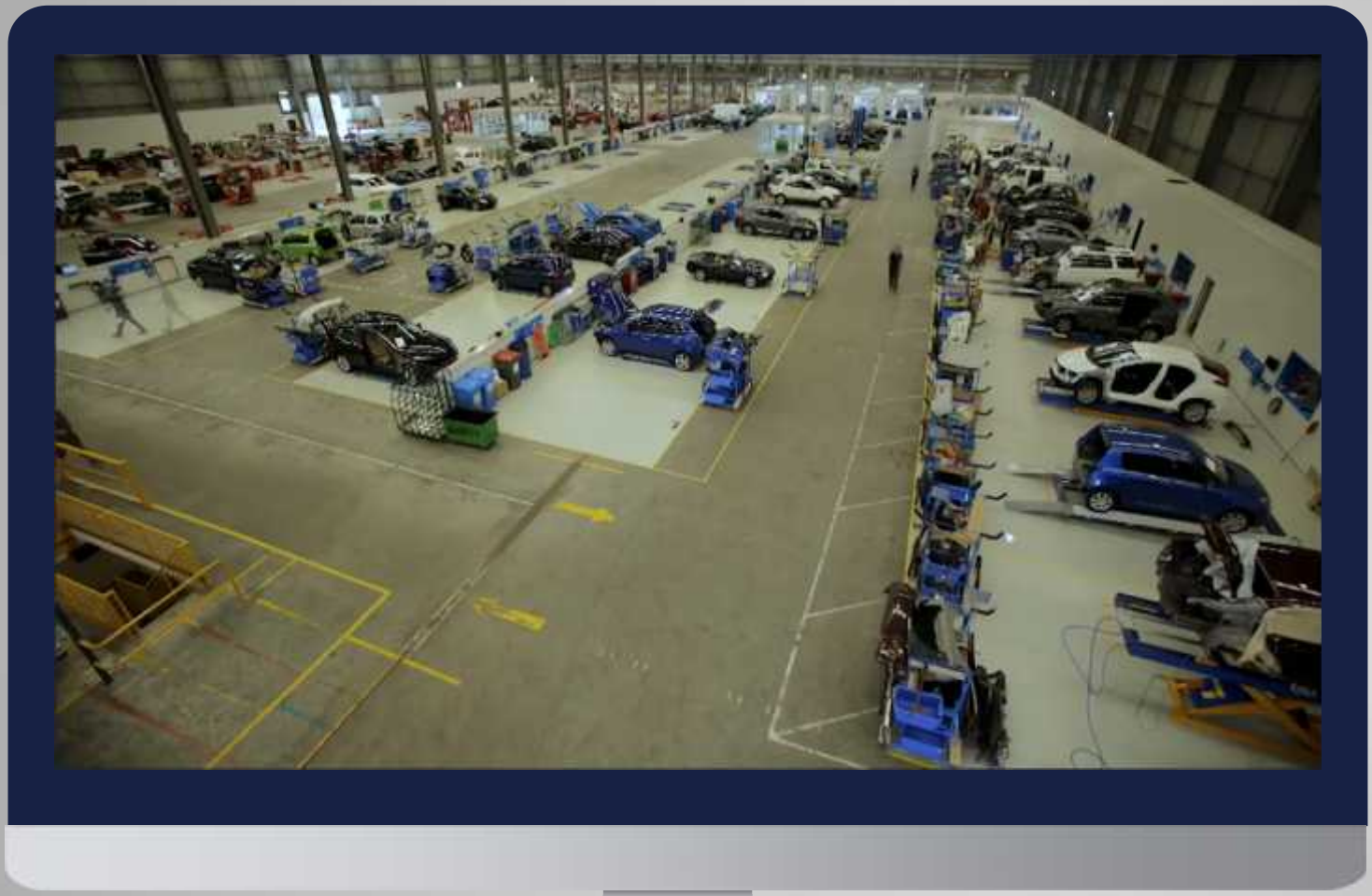
PayPal

ebay

MODRIA.







Case Study

Zero touch claims

Second Level of Change »

Platforms and Systemic Changes

Shift to large scale platforms in EDR and justice – Example - EU Directive – from 15 February 2016

Example: Microsoft

If you reside in the European Union and have purchased or consumed a product from Microsoft….

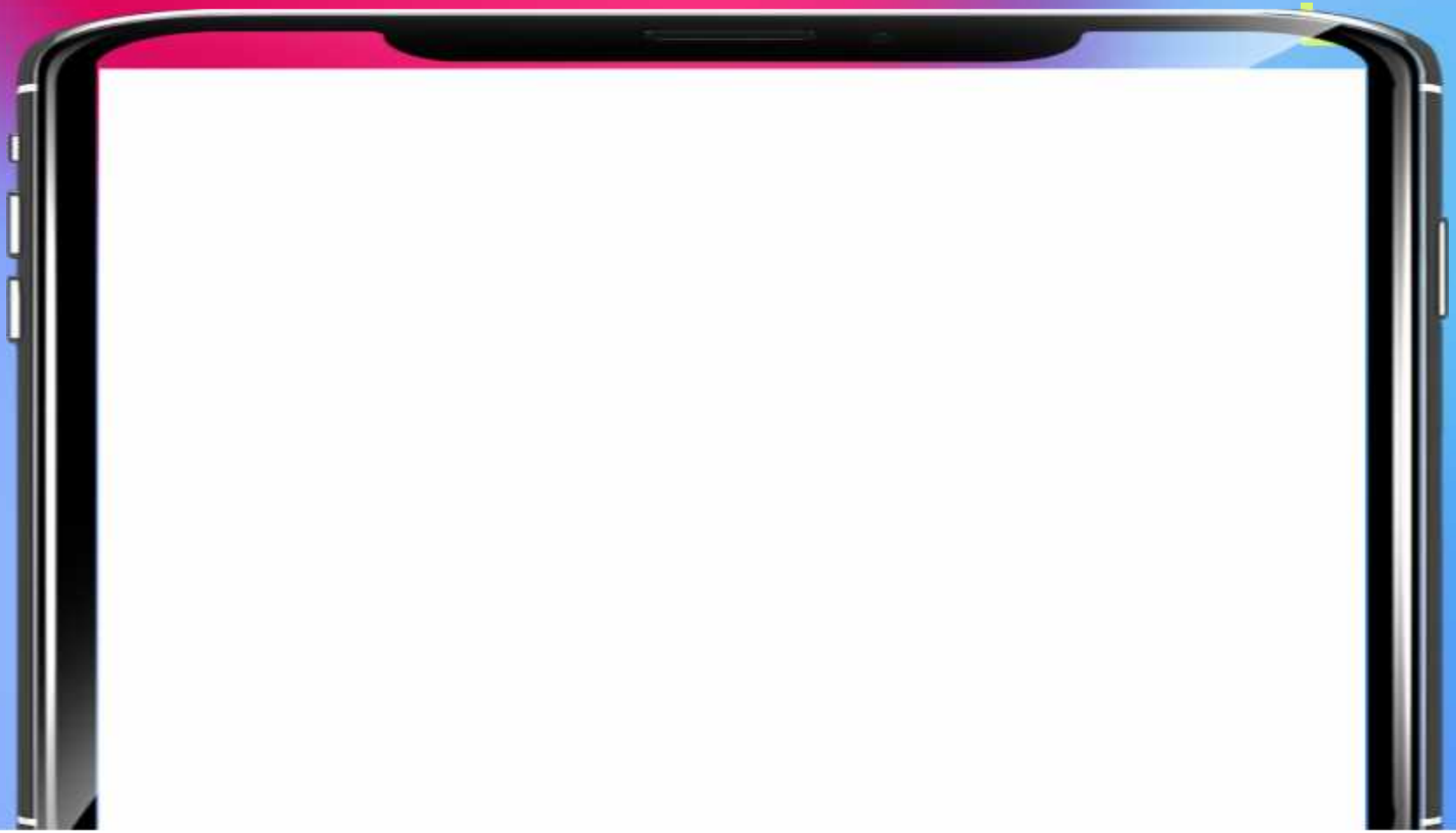
Dispute

If Microsoft is unable to resolve your issue through its customer support channels, as a European Union consumer, you have the option to submit a complaint through the ODR portal.

ODR

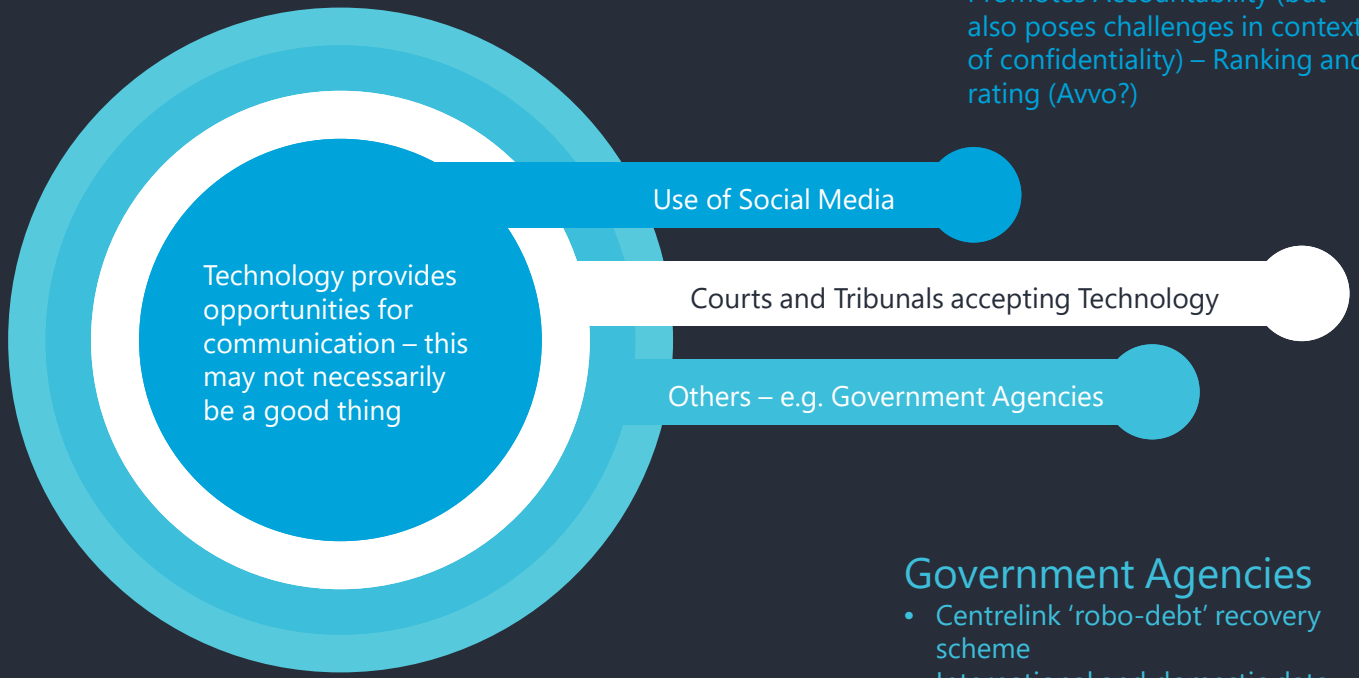
Complaints may be made in any one of the 23 official languages of the European Union. The ODR may suggest alternative dispute resolution ("ADR") entities competent to hear the claim and Microsoft has the option to try to resolve your complaint through the ADR entity.

Say hello to adieu



Trends in Technology

Influencing processes



Use of Social Media

- Facebook / Twitter / YouTube to engage with clients/business/stakeholders
- Promotes Accountability (but also poses challenges in context of confidentiality) – Ranking and rating (Avvo?)

Courts and Tribunals

- Administrative Appeals Tribunal/Federal Court of Australia adopting e-court facilities and supportive tech
- NSW Online Registry
- Push internationally to move towards online courts system and platforms
  - Northern Ireland Courts and Tribunal Service offers online process for small claims
  - Civil Processing Centre operates according to time-based and other rules

Government Agencies

- Centrelink 'robo-debt' recovery scheme
- International and domestic data retention

Third Level of Change »

Disruptive Technology

Disruptive Technologies can help, hinder and will change

Possible Benefits

Technological change was intended to provide many benefits. More access, ease of management but stress, disconnection issues and increased hostility issues.

Job Loss

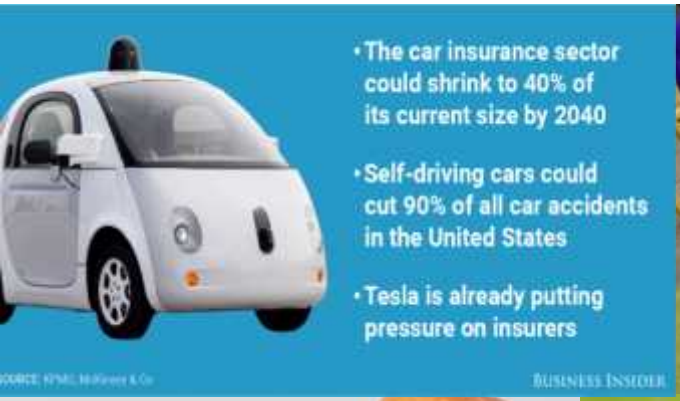
Many jobs will not exist in the same way in 10 – 20 years. Although the jobs may exist they will be 'altered.' Significant social disruption and changes in courts and tribunals.

Threats to Privacy

Significant threats to privacy. Dispute Resolution systems have not yet grappled with this (Impact on disputants eg health data). Use of recordings now common in family disputes.

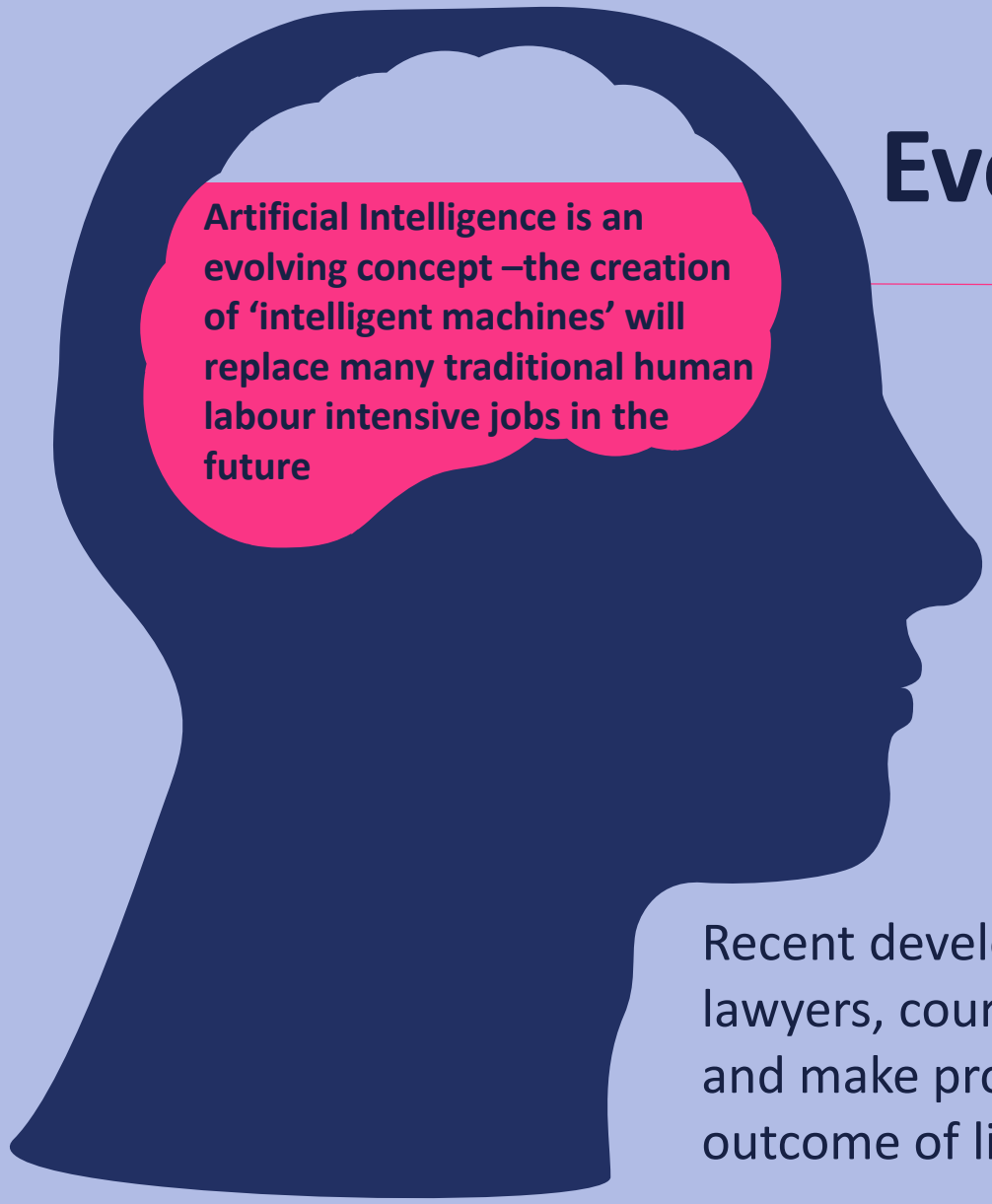
Loss of Social Interaction

What do the new ways of communication mean for social interaction? What does happen when rapport is created? Apology by text? Alexa or Siri?


• The car insurance sector could shrink to 40% of its current size by 2040
• Self-driving cars could cut 90% of all car accidents in the United States
• Tesla is already putting pressure on insurers
BUSINESS INSIDER


amazon
Prime Air

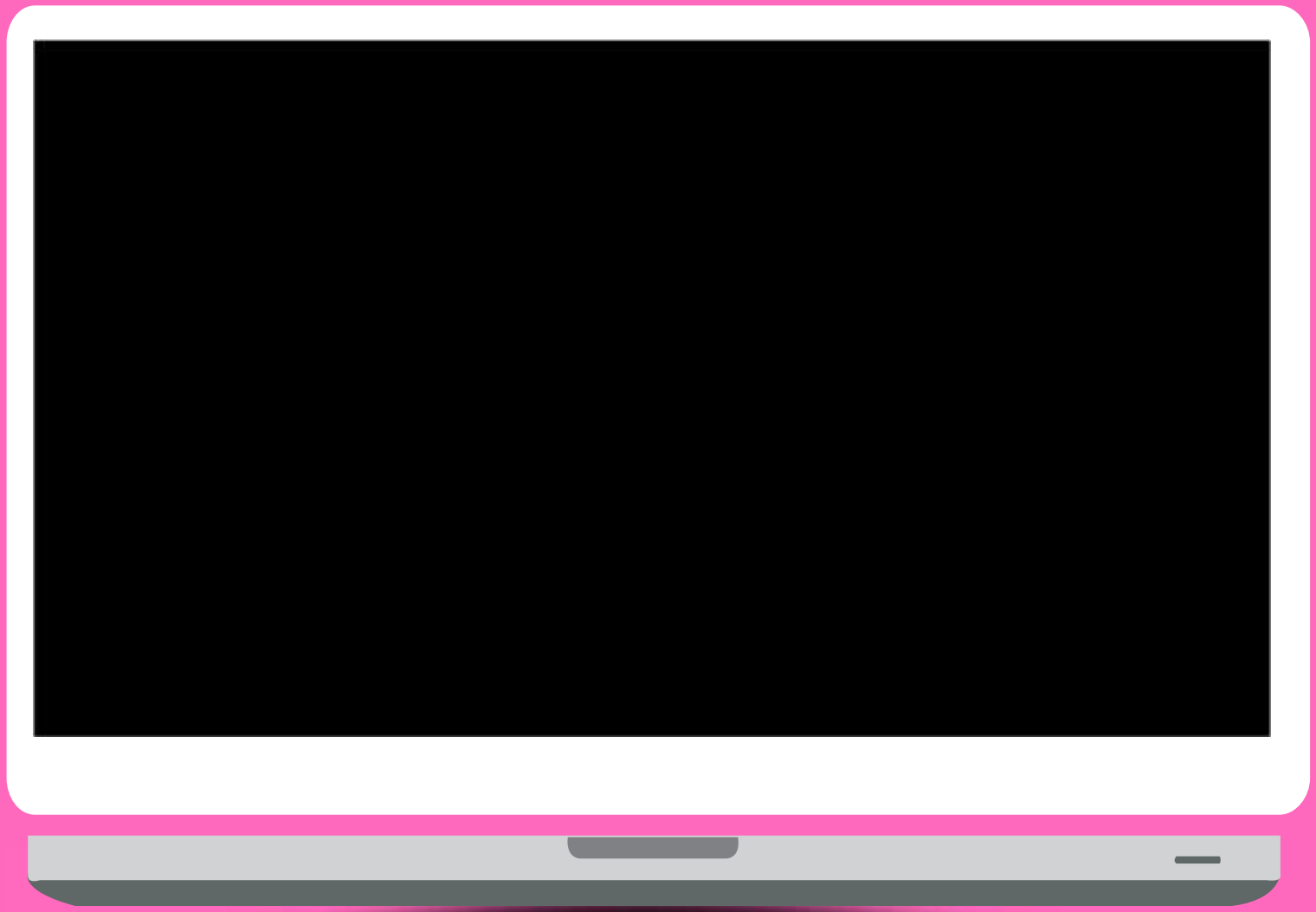
Evolution of AI



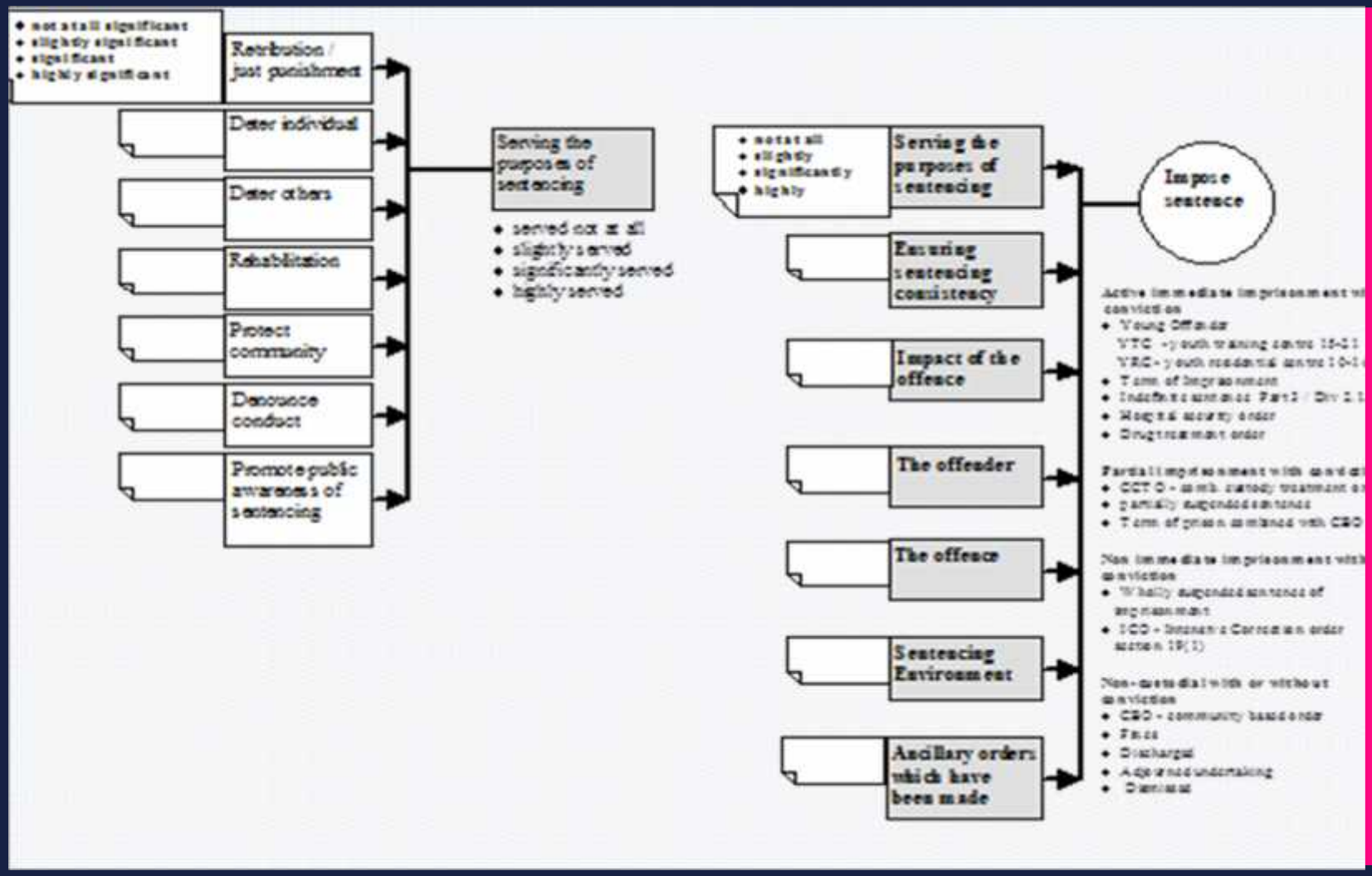
What will a judge or an arbitrator look like in 10, 20 or 30 years time?

- Role of AI in judging –to support, replace or disrupt existing judicial processes?
- What impact will AI have on adjudicative processes?

Recent developments indicate that there is a change in how lawyers, courts and others use technology, shifting to enhance and make processes more time efficient or even to predict the outcome of litigation.



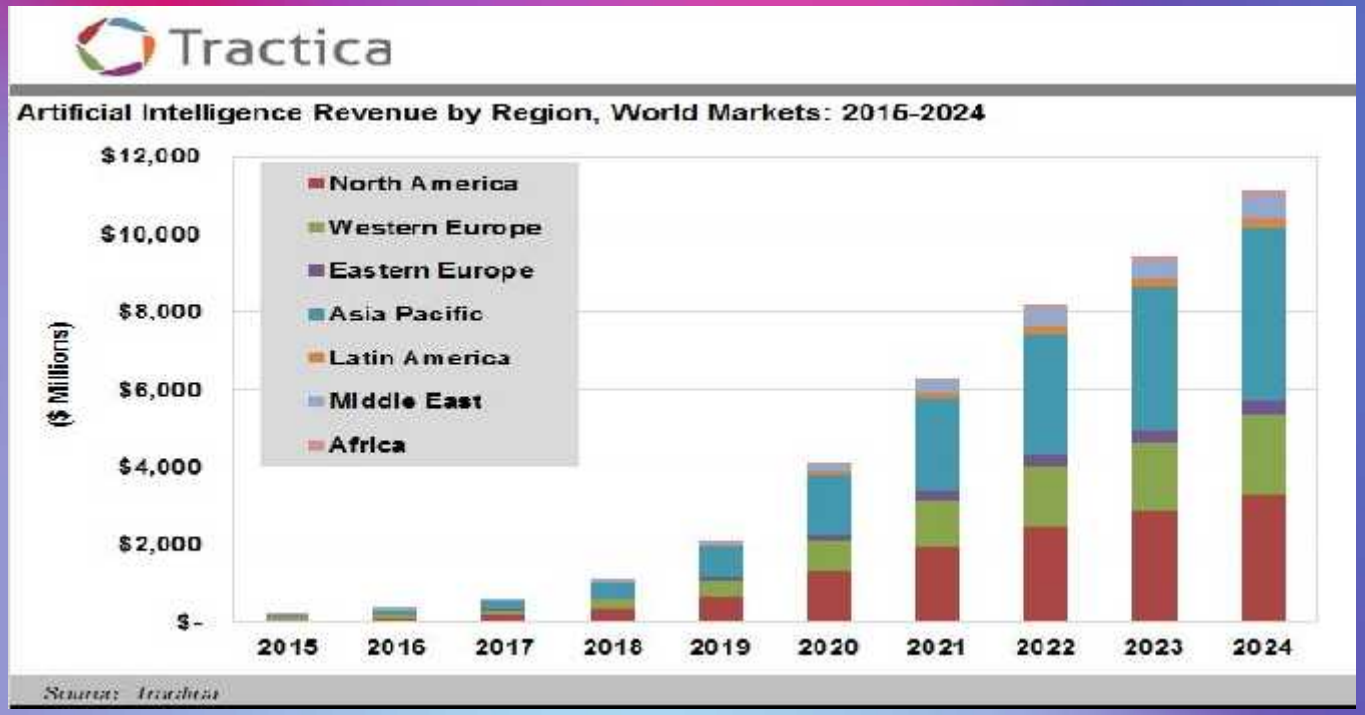
Inbuilt Bias

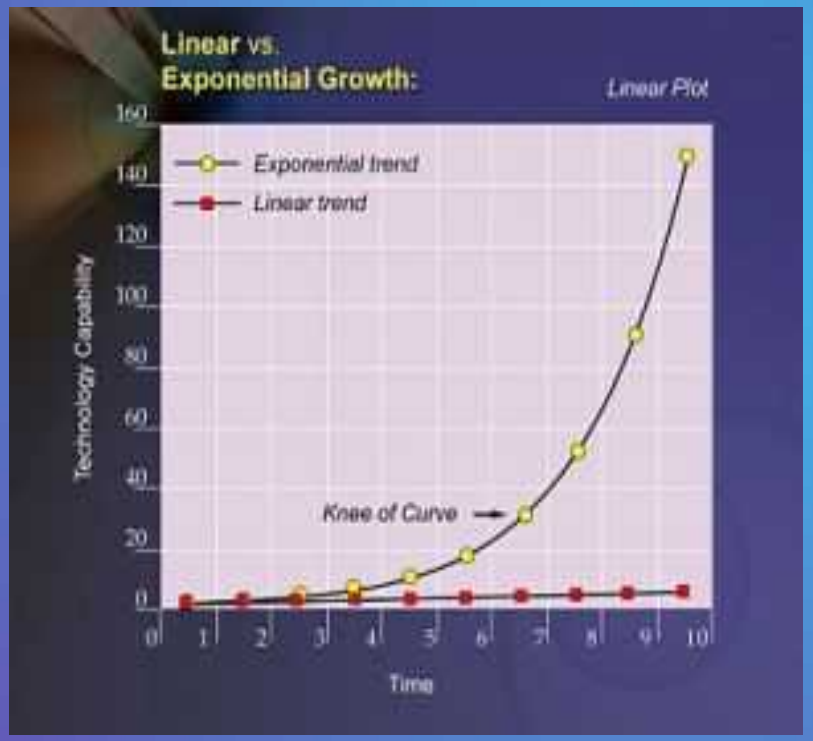


AI

– At the Simple Level

AI Rapid Growth and Rapid Increase in Investment

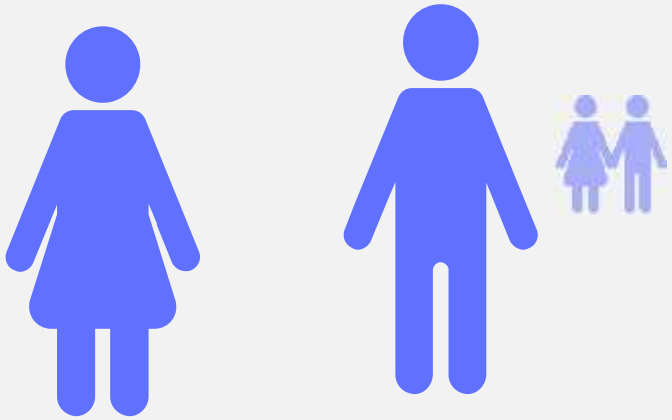




Third Level of Change

Family Disputes?

Use of AI in resolving challenging interpersonal conflict



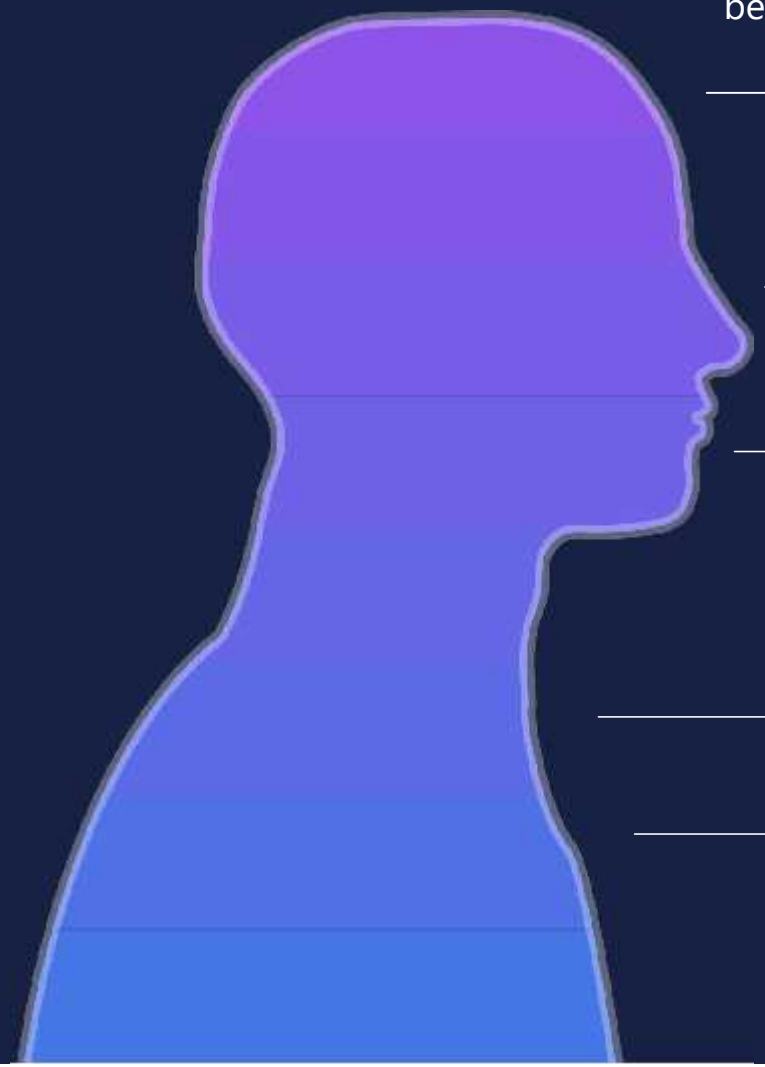
The development of negotiation support systems for facilitating the mediation process used for the resolution of family disputes

AI systems. E.g. Family Law ODR in South Australia

- These negotiation systems modelled on early prototypes? Split-Up, Family Winner and AssetDivider.

Role of Judges in the Era of Technology

The increasing use and development of AI leads to the question: Will some judges be 'phased out' by Judge AI?



- Complex Interactions with people
- Case management
- Interaction with other arbitrators and lay people
- Civic education
- The importance of responsiveness

Role of a Judge or Tribunal member
It is not just 'making a decision'

Judges and Tribunals members utilize
Induction and intuition, taking into account the social impact of decisions

There are important adjudicatory functions
For which AI may be both rigid and inflexible

AI Tribunal members?

Potential for AI to replace some decision makers.
Adjudication requires human intelligence, and AI can now replicate this.

An AI judge would have to apply the law to the facts and come up with a decision.

Experiments in Europe have shown that AI programmed to analyse decisions can have an accuracy rate of 79% in predicting outcomes

Current projects in Canada/Japan developing AI software that can weigh contradicting evidence, rules on cases, and predict case outcomes

Machine learning allows computer programs to learn through experience, rather than through hand-crafted computer functions

However, AI may not be suited to making a prediction or outcome if no precedent exists

Displacement

Technology will develop to a point where AI will replace some Tribunals in relation to simple adjudicatory functions

Control

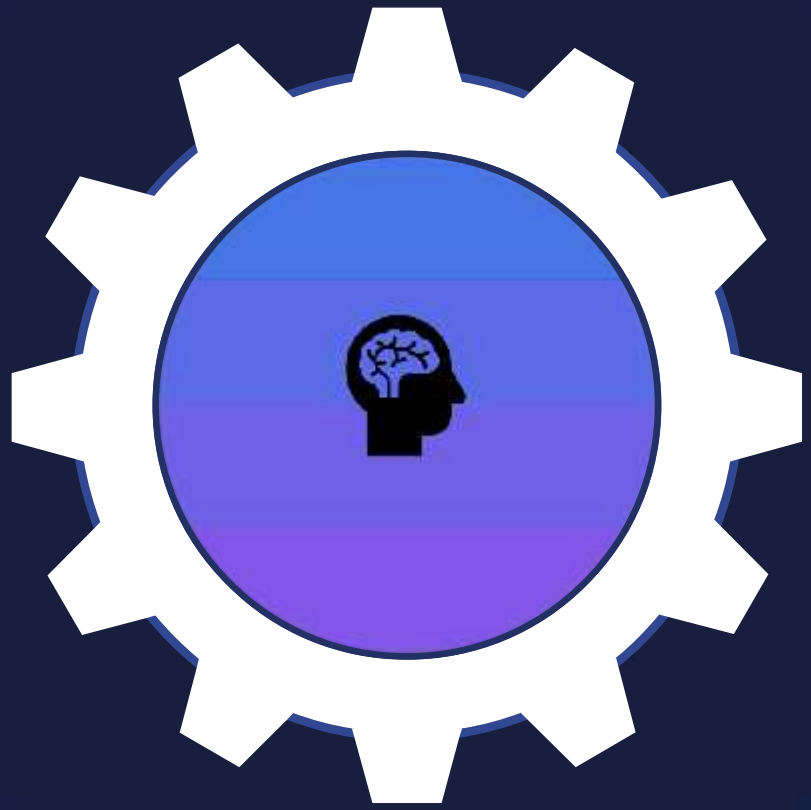
The impact of displacement will vary. Judges and Tribunal members are likely to stay in control

Issues Remain

- Legality of decisions made by 'AI Judge"
- Translating law into code
- Discretionary judgments

Review

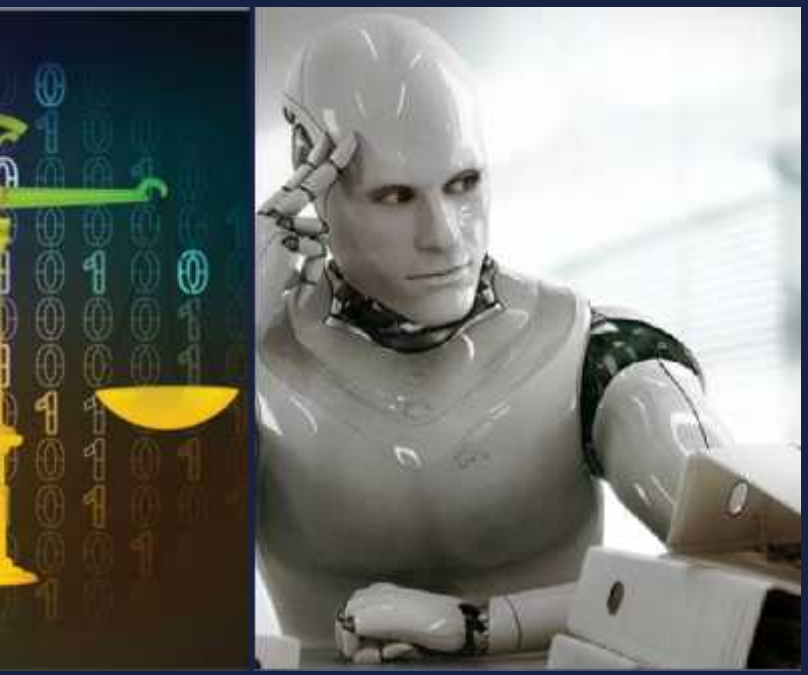
Will review of AI decisions by human decision makers be necessary?



Role of a Judge in the era of technology

As society moves into the era of technology, how will the role and nature of the Judge and Tribunal member change?

AI Issues (1)



Legal Authority

Can a computer program or automated process possess legal authority to make decisions?

Two key questions:

1. Who is the decision maker?
2. Who possesses the legal authority to make such a decision?

In some aspects, the legislature can enact laws to remove complexities and deem the decision to be made with legal authority

- However, how it will stand up in court is not yet clear.

The public and open nature of adjudication is a part of society and culture, which cannot be easily abandoned. Who programs the AI?

AI Issues (2)

Translating Law into Code

Computer programmers and IT professionals lack knowledge of the law and legal qualifications yet they are tasked with translating law into code.

Law is complex, includes statutory presumptions and discretion –coding these intricacies may prove to be a challenge.

The ever changing nature of law as a result of enactment, interpretation and amendments means constant updates.

- Autonomous systems would need to apply law from various points in time, and ensure that cases are dealt with strict date parameters.

Lawyers and policymakers must be included in the design and implementation process.

AI Issues (3)

Discretionary Judgment

Lack of discretion may lead to unfair or arbitrary judicial decisions with a lack of individualism, consideration of the circumstances or a lack of understanding of nuance in law.

Discretion at the core of common law judicial decision making -
Issues surrounding bias in AI

Discretionary decisions need to take into consideration:

- Community values
- Subjective features of the parties
- Other surrounding circumstances

Suggestions by Perry J to replace discretionary principles in law with black-and-white provisions

- Argues amendments would simplify law and make it easier to synthesise with AI in the future

Can you foresee a day, when smart machines, driven by artificial intelligences, will assist in courtroom fact finding or, more controversially even, judicial decision making?

That day is already here, and its putting a significant strain on how the judiciary goes about doing things.

Chief Justice John G. Roberts Jr,
Supreme Court of the United States of America
April 11, 2017, Rensselaer Polytechnic Institute

Technology Supporting Judges

Support
Technological advances may be used to support human judges, Tribunal members and registrars in their judicial work

Replace
App and bot – virtual assistant to virtual assistant.
Complete independent production of 'reasons'

Augmented Judges or selection
Judicial officers could modify their genetic or physical makeup!

- Eliminate aging/increase memory/reduce fatigue
- Active ventromedial region

Supplement
AI programs could be used to supplement work by producing draft judgments that can be amended and enhanced by humans.

Transhumanism?
Improving the human body through integrating technology into the body – posthumanism?

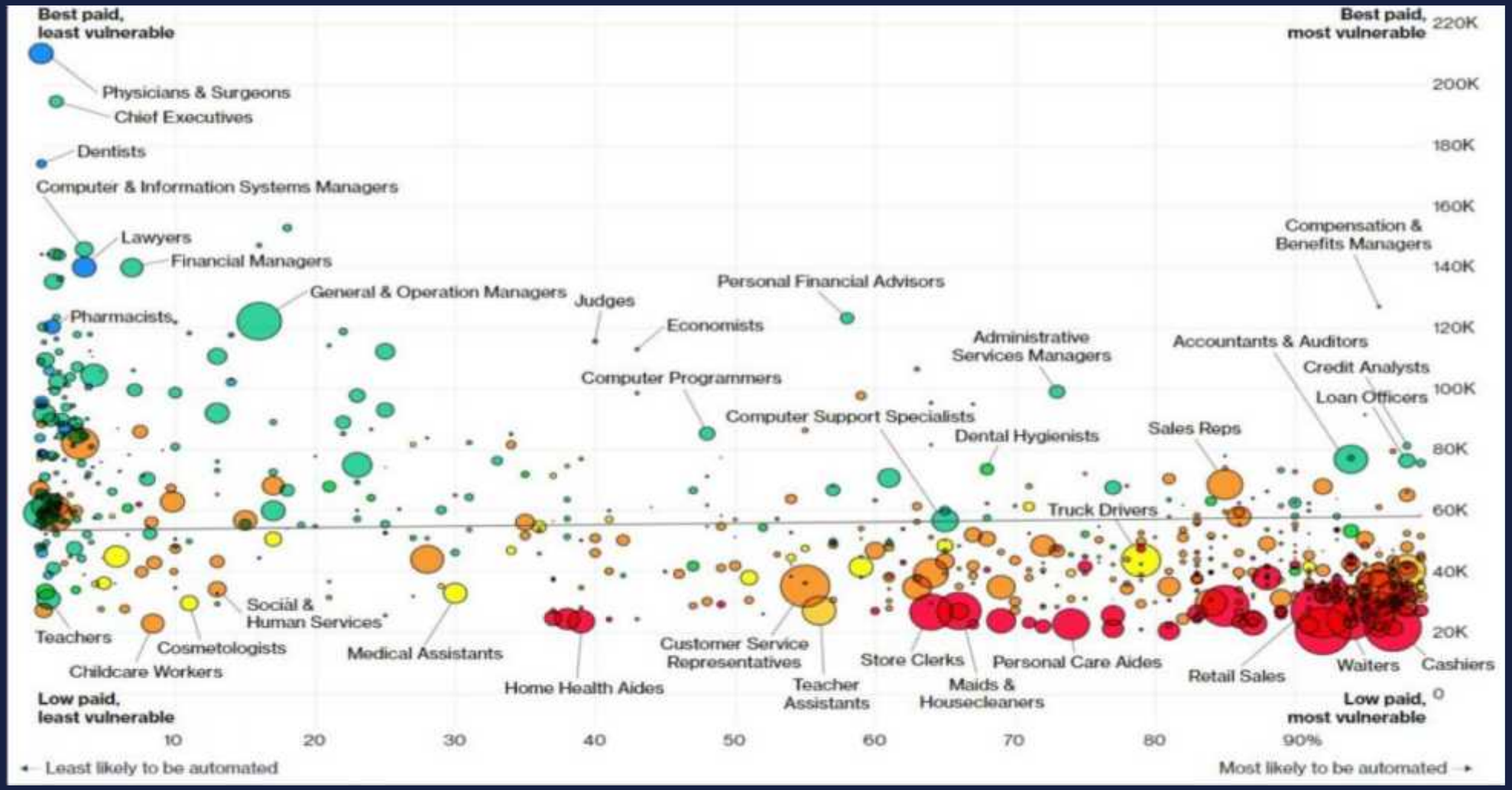
The Jobless Future

What about lawyers?

New Technologies
Such as driverless cars and 3-D printing will eventually replace many workers

Martin Ford – *Rise of the Robots:*
Technology and the Threat of a Jobless Future

Court and Tribunal
What jobs will be replaced?


Best paid, least vulnerable
Best paid, most vulnerable
Physicians & Surgeons
Chief Executives
Dentists
Computer & Information Systems Managers
Lawyers
Financial Managers
Pharmacists
General & Operation Managers
Judges
Economists
Personal Financial Advisors
Computer Programmers
Computer Support Specialists
Administrative Services Managers
Dental Hygienists
Sales Reps
Accountants & Auditors
Credit Analysts
Loan Officers
Compensation & Benefits Managers
Truck Drivers
Teachers
Childcare Workers
Cosmetologists
Social & Human Services
Medical Assistants
Home Health Aides
Customer Service Representatives
Teacher Assistants
Store Clerks
Maids & Housecleaners
Personal Care Aides
Retail Sales
Waiters
Cashiers
Low paid, least vulnerable
Low paid, most vulnerable
220K
200K
180K
160K
140K
120K
100K
80K
60K
40K
20K
0
10
20
30
40
50
60
70
80
90%
Least likely to be automated
Most likely to be automated

Likely to Change Within Five Years

Least Vulnerable Jobs

Social Skills

According to most research these skills are becoming more important. Computers are still poor as simulating social interaction. Affective technology is changing this. Jobs that involve creativity are less likely to be replaced (at least in the short term) – however tech can now paint, compose, write stories and anticipate responses

Automated Responsive

Automated, responsive devices will replace some people

Big Data

Visual recognition, diagnostic and big data devices will replace many jobs. Think manufacturing, farming,

Knowledge Processes

Some decision making processes will be replaced by simple tech supported knowledge processes.

Select Task Automation

Many jobs can be replaced but many will have parts of their work automated

What else?

Changes specific to DR Area?

Knowledge based jobs are not safe

Doctors, lawyers and judges face considerable changes. It is more likely that the impact on tribunal members will be more extensive than on judges or judges or lawyers (higher % risk).

Some jobs are already being replaced

Expert radiologists are routinely outperformed by pattern-recognition software, diagnosticians by simple computer questionnaires.

Replacing people

In 2012, Silicon Valley investor Vinod Khosla predicted that algorithms and machines would replace 80% of doctors within a generation - IBM Watson Supercomputer.

Some replacement tech will impact on the work that you do - Ross Intelligence – on the cloud lawyer

Technological Disruption

Initially, more likely to have an impact on advisory and determinative DR processes. In the longer term, supportive, replacement and disruptive technologies will all have a broader impact on the justice sector.

Big Data

Significant changes across the justice sector:

More accountability?

More risk (confidentiality)

Who uses your court or tribunal? How do they use it? How do they find out about it? How do they develop it? What do practitioners do? How much does it cost (personal time and other)? What do they need?

Advanced Stat Tools

ProjectWe currently have little idea about who uses courts and tribunals.
in courts dealing with complexity and analytics. Who is more likely to progress through the system and how

New Technologies:

Examples – social media and net tracking has been used to:

- edict pregnancy and due dates
- predict that you will move house
- Google typing speed to decide search results
- Predictive policing – predicting disease – predicting disputes? Most opportunity and most risk?

Conclusion

Changing Processes

- Using technology as a medium to 'support' or supplant' processes – e.g. Skype/video conferencing to holograms
- Use of 'advisory' AI to reshape new alternative understandings and potentially replace some advisory and determinative practitioners

Changing Styles of interaction

- Collaborative techniques and predictive technology to provide more support and referral avenues for disputants

Improving case management, reporting and data collection

- Use of disputant-focused inputs and tracking technologies – rise of trip advisor style inputs (mapped with data preferences)

Using data in different ways (changing the nature of data retention and collection)

- Use of 'big data' to link dispute criteria and data fields or to map and promote transparency or comparability

Questions?

Thank you.
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