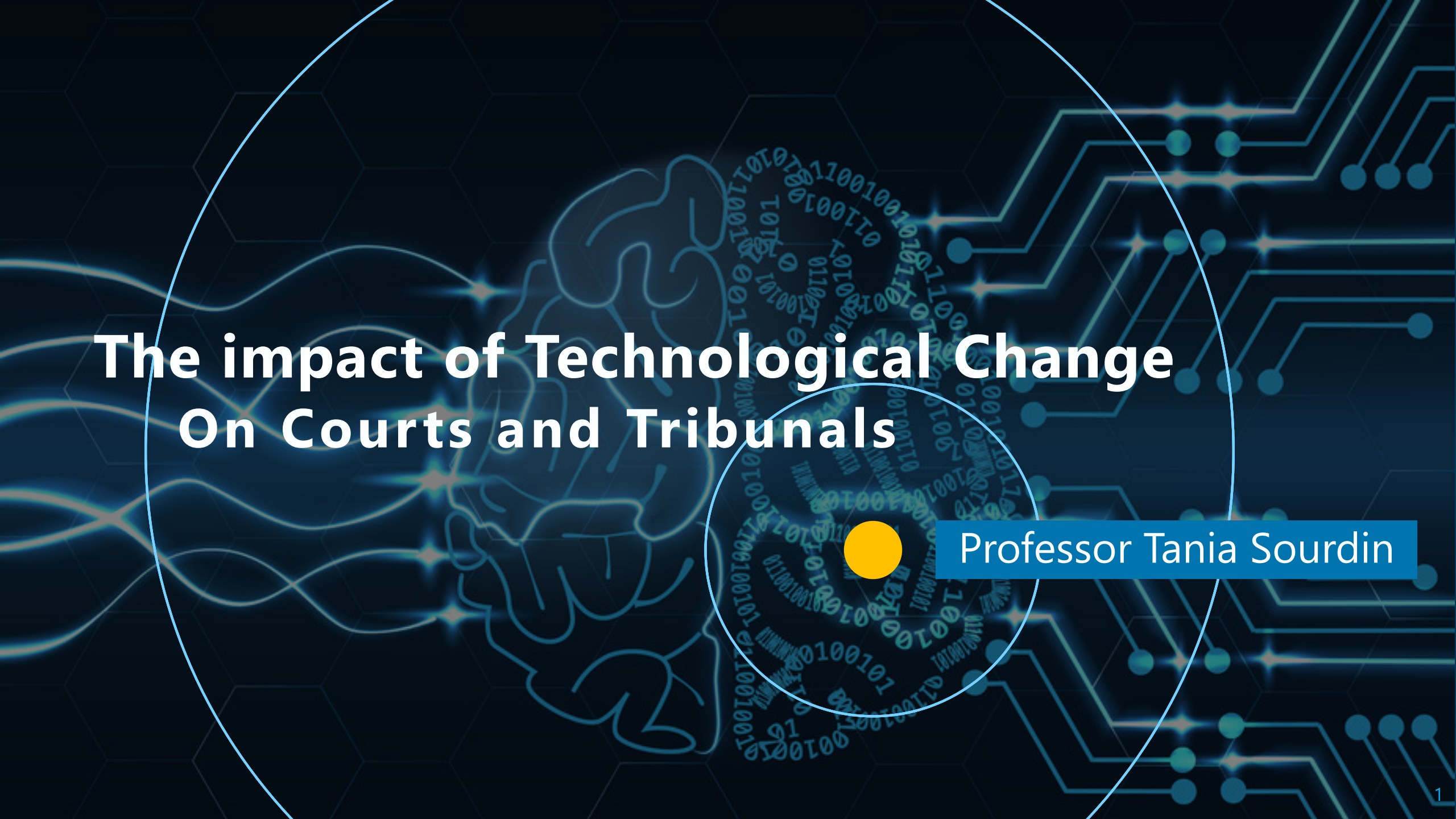


The impact of Technological Change On Courts and Tribunals

Professor Tania Sourdin

CHANGE

Three Levels of Change

Lower level changes for the next 5-10 years

Supportive Technology

First, and at the most basic level, technology can assist to inform, support and advise people involved in justice activities. Apps, websites, info, e – forms, justice café.

Replacement Technology

Technology can replace functions and activities that were previously carried out by humans. Case management, letters, listing, sharing, TDRS, ODR, Modria add ons. See BC.

Disruptive Technology

Technology can change that way that determinative, advisory and facilitative processes work and inform system reform through the use of big data sets and more complex knowledge generation. AI and analytics.

INTRODUCTION

What is Driving Change? The Digital Age

We are more connected than ever before…

More connected devices than toilets

- 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

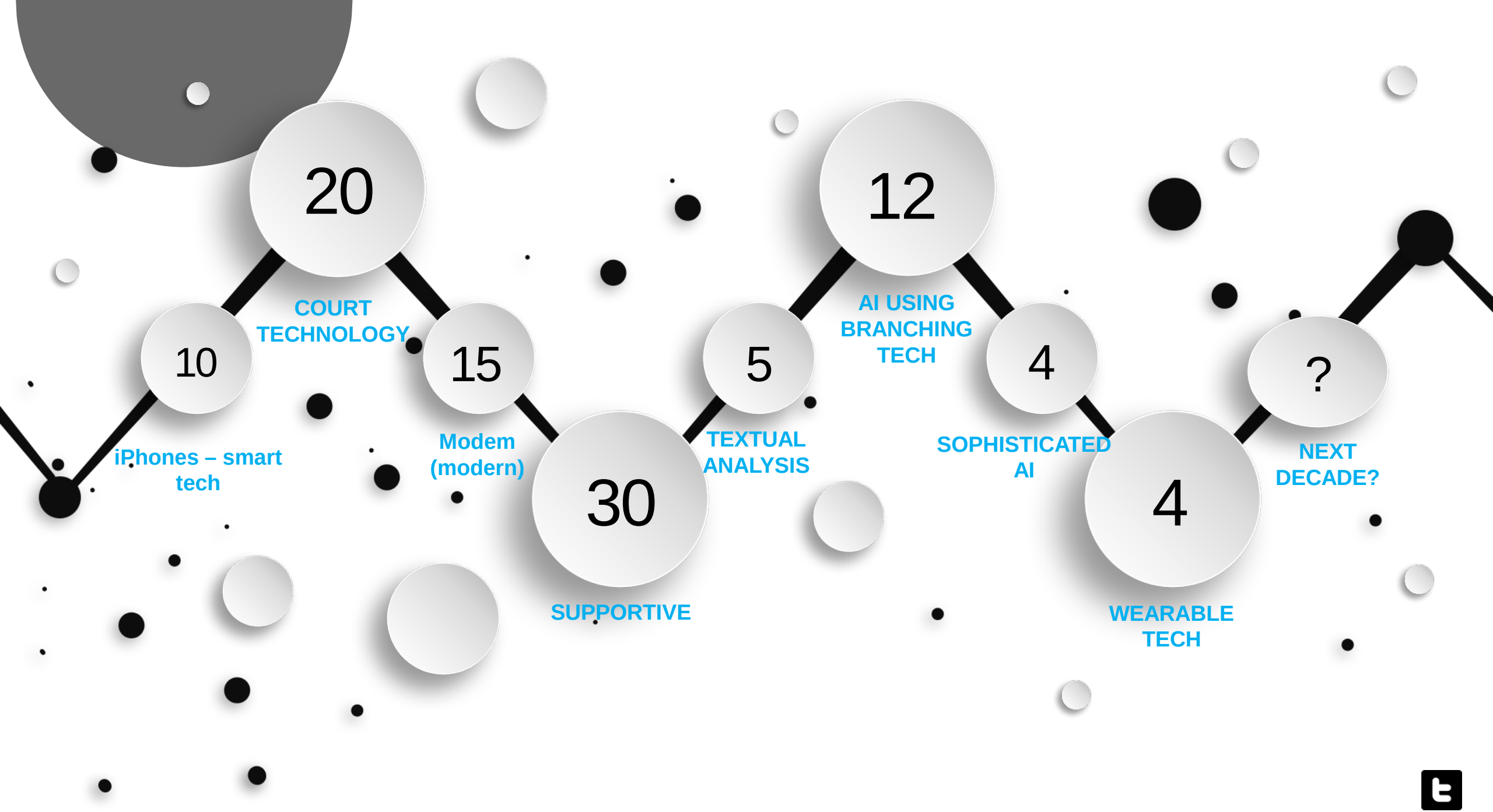
Need for Reform

- Significant obstacles in justice reform
- What happens when judicial reform 'clashes' with disruptive technology?
- Rapid changes in service deliver (e.g. Uber) gives rise to unexpected results
- UK reforms, BC reforms, Productivity Commission

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

CHANGES

My First Computer – Osborne


20
COURT TECHNOLOGY
10
iPhones – smart tech
15
Modem (modern)
30
SUPPORTIVE
5
TEXTUAL ANALYSIS
12
AI USING BRANCHING TECH
4
SOPHISTICATED AI
4
WEARABLE TECH
?
NEXT DECADE?

Not so good Technology Decisions - Yahoo

1998 Chooses not to acquire Google for $1 million.

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

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

2016 Yahoo accepts a $4.48 Billion purchase from Verizon.

Google

YAHOO!

CHANGE

Lower Levels of Change - Supportive

Lower level changes for the next 5-10 years

Providing Information

- Easy access. 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.
- On line, changed costing, 24/7 and responsive

Lodging and Claiming

- Changing court and tribunal processes. Canada – intake, diagnosis and support
- http://www.civiljustice.info/cgi/viewcontent.cgi?article=1003&context=timeliness
- Shift to managing disputes on line

No Need to Travel

Replacement Technologies

Significant Growth

!




Large Scale ODR

Modria – Predicted to deal with 1 Billion Disputes per year by 2017 – it has already dealt with more than 500 million

E-Courts and E-Arbitration

US, Canada and UK.
Sometimes linked with the big providers. HMOC.
E Discovery - https://www.youtube.com/user/KROLLONTRACK

Boutique Providers

Guided Resolution - http://www.guidedresolution.com.au/
Adieu (Queensland)
Apps, apps and more apps

EU Initiatives

Rolled out from the beginning of 2016.

WHY?

- Can reduce costs and time – case management
- Geographical issues, power/ violence issues
- Consumer preference and access – well developed in the on line consumer area (Paypal, Squaretrade)
- Limited AI - to understand alternatives, define issues and assist with data mining (branching) - Supporting decision making (BATNA/WATNA)
- Some court developments support replacement technologies – eg e-discovery

At eBay and PayPal we built and scaled the systems that solve over **60,000,000** disputes every year.

400,000,000 resolved cases later, Modria and it's new technology was born.

PayPal

ebay

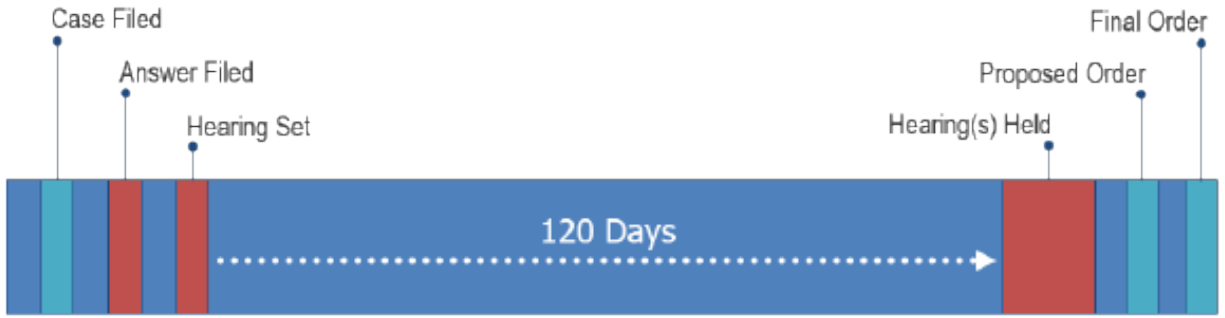
+

400,000,000 cases of experience

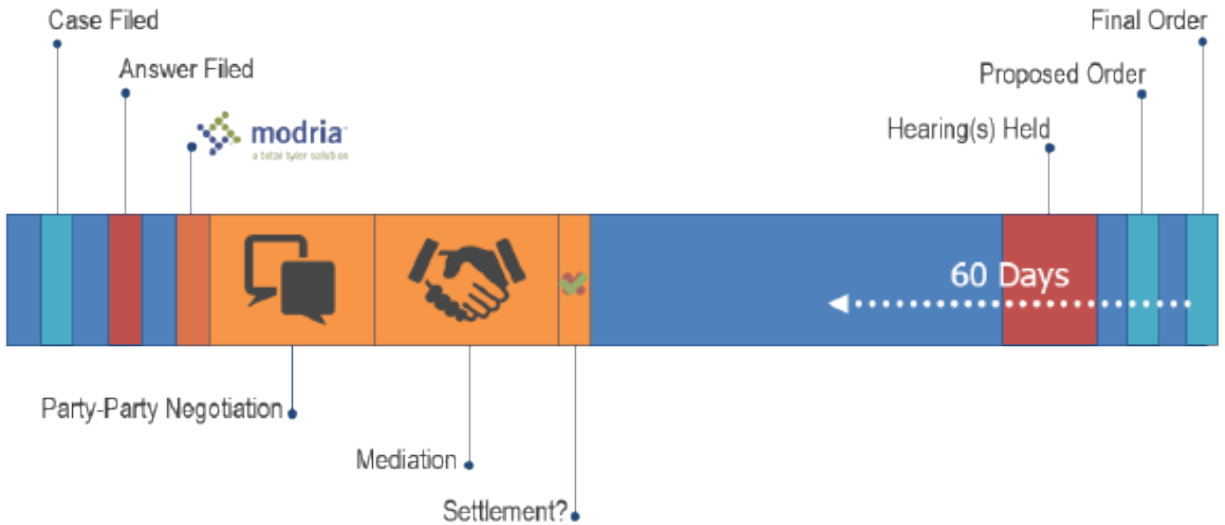
=

MODRIA

Traditional Case Lifecycle



ODR Case Lifecycle



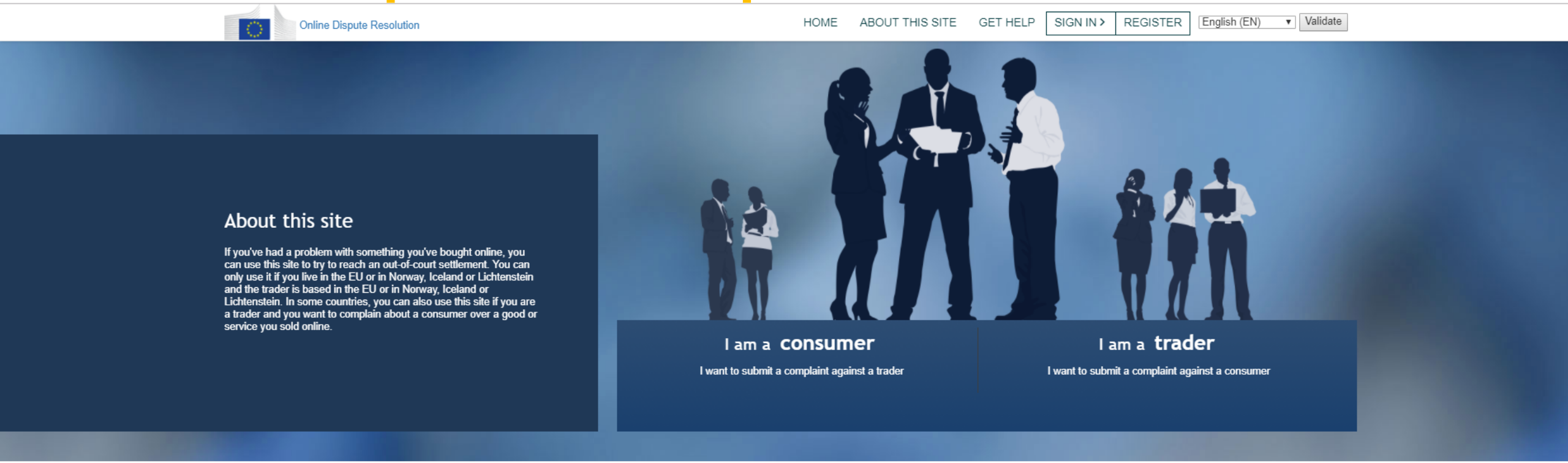
PLATFORMS AND SYSTEMATIC CHANGES

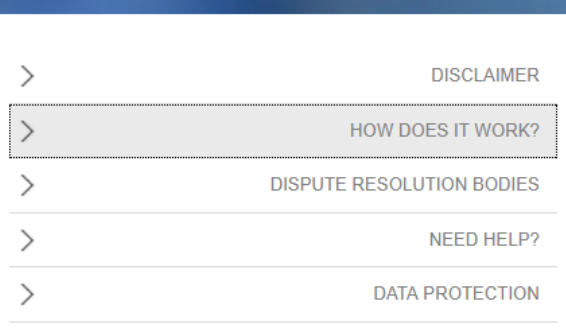
Shift to large scale platforms in EDR and justice – Example - EU Directive – from 15 February 2016

EXAMPLE: Microsoft

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

Example: Online Dispute Resolution Portal EU





HOW DOES IT WORK?

Is your complaint about a good or service you bought online? If it is, you can complain using this site. You will need to choose a dispute resolution body to deal with the complaint. This is something you and the other party involved have to agree on.

Each dispute resolution body has its own rules and procedures. They're usually simpler, quicker and cheaper than going to court. Dispute resolution bodies in the EU and in Norway, Iceland and Lichtenstein.

You can do everything online in **4 main steps:**

1. **Submitting** a complaint.
2. **Agreeing** on a dispute resolution body.
3. Complaint **handling** by the dispute resolution body.
4. **Outcome and closure** of complaint.

The different stages in the procedure

Trends in Technology influencing Processes

Technology provides opportunities for communication – this may not necessarily be a good thing!

Use of social media

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

Courts and Tribunals adopting technology

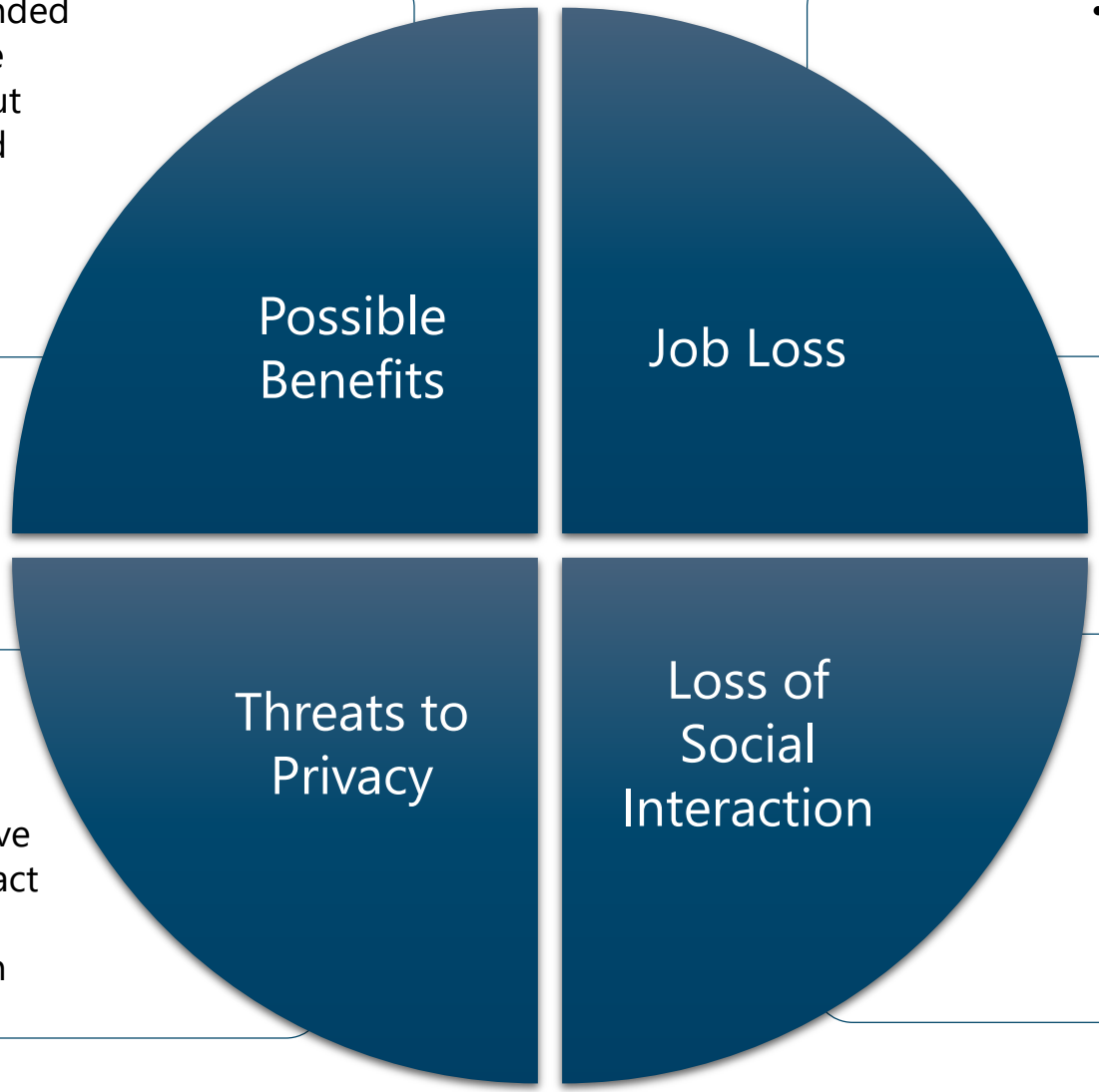
- Administrative Appeals Tribunal/Federal Court of Australia adopting e-court facilities and supportive tech
- Push internationally to move towards online courts system and platforms
  - Northern Ireland Courts and Tribunal Service offers online process for small claims
  - Civil Processing Centre operates according to time-based and other rules
  - Makes orders (final adjudication remains face-to-face option)

CHANGE

The Third Level of Change

Disruptive Technologies can help, hinder and will change

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



- Many jobs will not exist in 10 – 20 years. Significant social disruption and changes in courts and tribunals.

- Significant threats to privacy. Courts and Tribunal systems have not yet grappled with this (Impact on disputants eg Doctors data). Use of recordings now common in family disputes.

- What do the new ways of communication mean for social interaction? What does happen when rapport is created?


Google


APIS COR
This house was
printed in a day

Evolution of AI

Artificial Intelligence is an evolving concept –the creation of 'intelligent machines' will replace many traditional human labourintensive jobs in the future

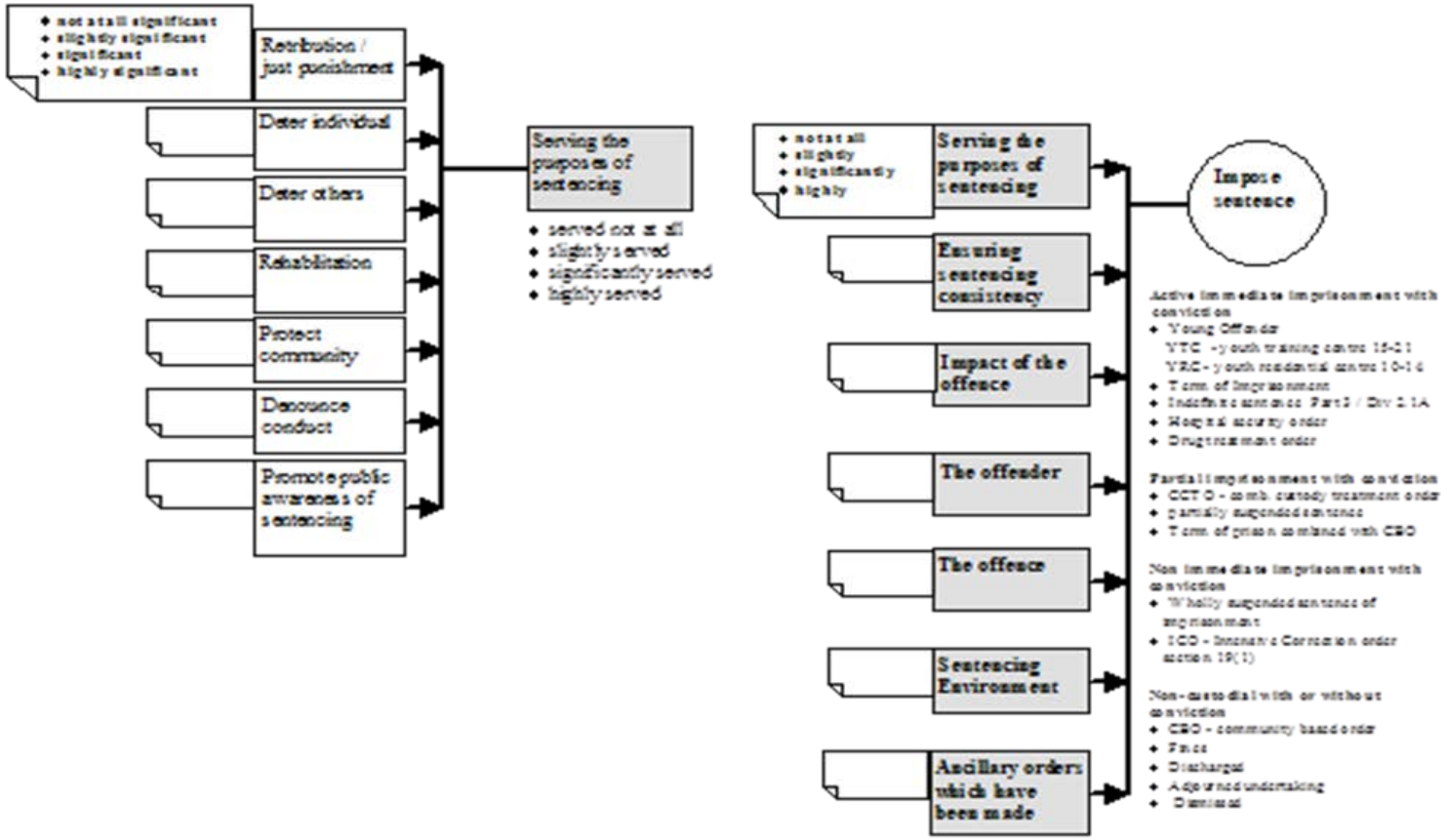
What will a judge or an arbitrator look like in 10, 20 or 30 years time?

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

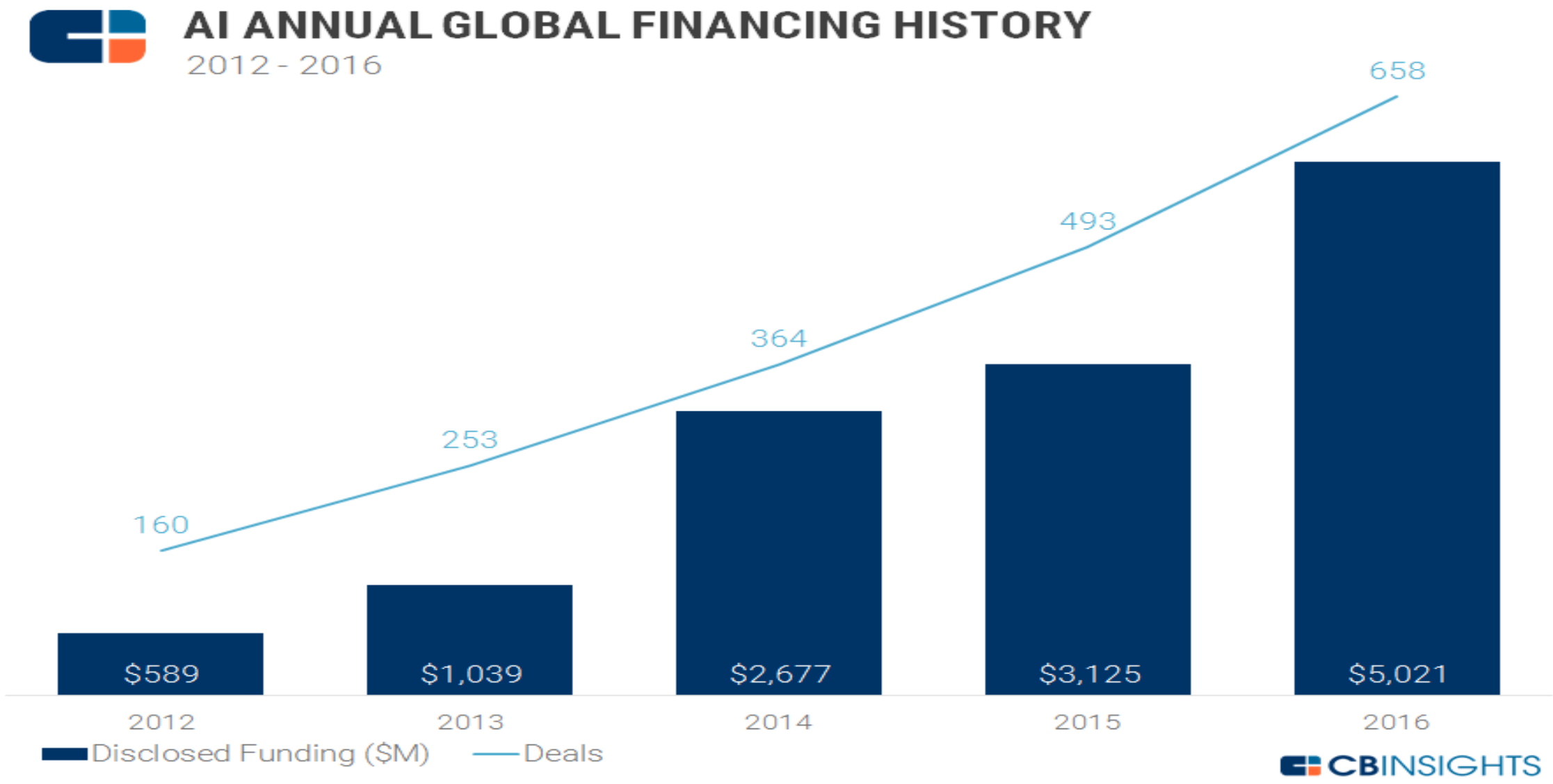
Recent developments indicate that there is a change in how lawyers, courts and others use technology, shifting to enhance and make processes more time efficient or even to predict the outcome of litigation.

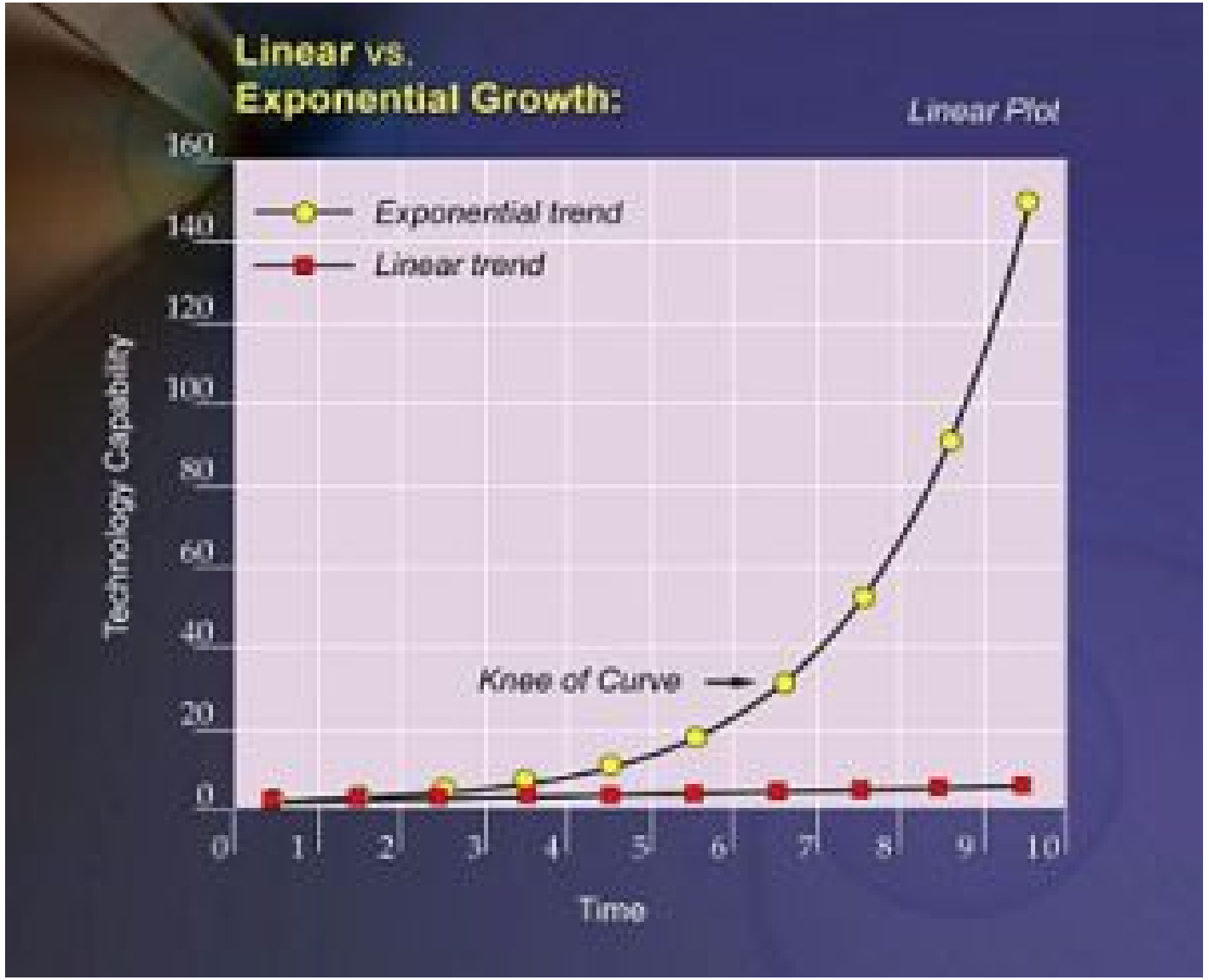
There are significant risks - http://washingtonmonthly.com/magazine/junejulyaugust-2017/code-of-silence/#.WUsNHUdqIRy.twitter

AI – At the Simple Level



AI – Rapid Growth and Rapid Increase in Investment





The Exponential Curve and Technology

Family Disputes?

- The development of negotiation support systems for facilitating the mediation process used for the resolution of family disputes - AI systems.
- These negotiation systems modelled on early prototypes? Split-Up, Family Winner and AssetDivider.

ROLE OF JUDGE 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?

Role of Judge not just 'making a decision'

- Judges need to utilize induction and intuition, taking into account the social impact of decisions. AI may be both rigid and inflexible.
- Judicial Activism
- Complex interactions with people
- Case management
- Civic education
- Contribution to society / social commentary
- The responsive judge –and the importance of responsiveness
- Interaction with other judges/lay people

AI JUDGE?

Talks about AI replacing judges in the near future.

The task of judicial decision making requires human intelligence, and AI can now replicate this.

An AI judge or AI Tribunal 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 project in Canada/Japan developing AI software that can weigh contradicting evidence, rules on cases, and predict case outcomes - http://www.cbc.ca/news/canada/edmonton/legal-artificial-intelligence-alberta-japan-1.4296763

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.

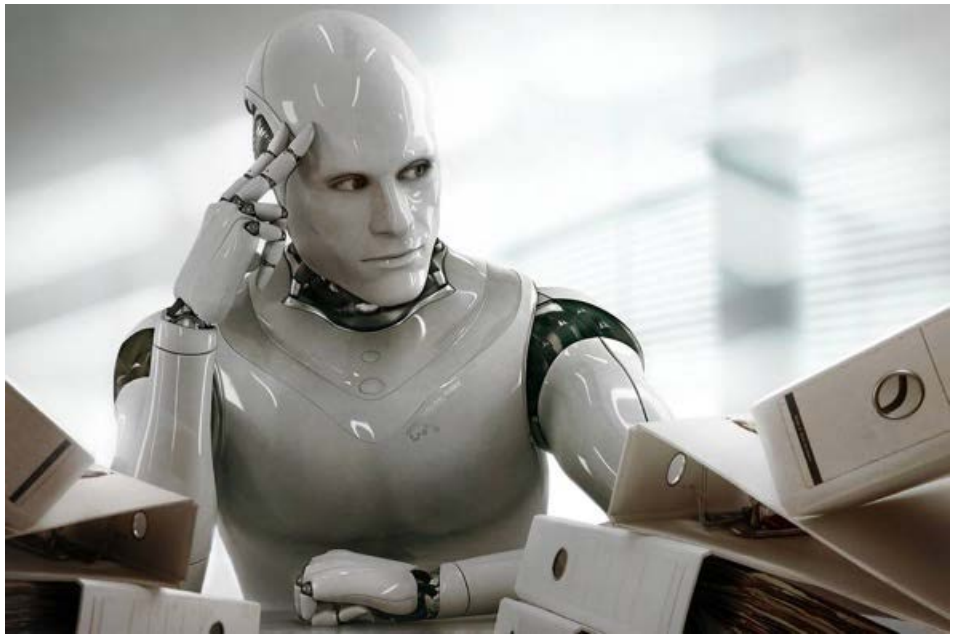
ROLE OF JUDGE IN THE ERA OF TECHNOLOGY

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

Technology will develop to a point where AI will replace human judges and some tribunal members in relation to some simple adjudicatory functions

- However, this impact will vary. Judges and Tribunal members more likely to remain in 'control'
- Some issues remain:
  - Legality of decisions made by 'AI Judge"
  - Translating law into code
  - Discretionary judgments
- Will appellate and other reviews of AI decisions by human decision makers be necessary?

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)

Recent studies have noted that AI programs can be biased based on its surroundings or programmed content

Discretionary Judgement

Discretion at the core of common law judicial decision making

Still issues surrounding bias in AI

- Programmers can replicate bias without intending to do so in AI systems
- Recent controversy of AI programs being biased towards a particular race of gender due to:
  - Data (predictive recidivism)
  - Interaction with other systems or online comments
    - See Microsoft 'Tay' chatbox on Twitter producing racist, pro Hitler comments after being 'influenced' by tweets
  - Predictive coding based on what people want to see
  - Algorithms calculated on similar content
    - E.g. likes on Facebook will show similar suggested content on newsfeeds

AI ISSUES (4)

Lack of discretion may lead to unfair or arbitrary judicial decisions being made due to a lack of individualism, consideration of the circumstances or a lack of nuance in the law

Discretionary Judgment

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
- However, such amendments may result in unfair or arbitrary decisions due to lack of:
  - Individualised justice
  - Discretion
  - Nuance in the law

“

“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

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

AI programs could supplement judges by producing draft judgments to produce their own reasons

- Benefits:
  - Technological advances may be used to support human 'judges' in their judicial work
  - Goal of the development of AI systems should be to complement current human work? Or
  - Replacement of human decision makers (at some levels?)?

Transhumanism?

- improving the human body through integrating technology into the body
- Judicial officers could modify their genetic or physical makeup!
  - Eliminate aging/increase memory/reduce fatigue

Supportive Technology

Technology can supplement existing court procedures and provide flexibility for judges and judicial staff

Online Courtrooms and facilities have been trialled and implemented in various jurisdictions across Australia

- NSW Online Registry for SC, DC and Local Court matters
- Federal Court E-Courtroom
- Commonwealth Courts Portal

There have been calls for a transition to online courts across Australia:

- Reduces costs of litigants (Kirby)
- Introduction of supportive technology (distributive courtroom) advocated by Warren CJ
  - Physical courtroom but participants are 'virtual' rather than physical
  - Use of holographic projections or screens for people to appear anywhere

KEY TRENDS?

- Growth in advisory AI
- Growth in net awareness – how are decisions made?
- Growth in understanding of co operative processes
- Better understanding of the impacts of competitive approaches – co sourcing
- European Small Claims Procedure (ESCP) and similar
- More ODR – more EDR (cross border) – ODR accepted and preferred?
- New Technologies - Nobody knew that they needed/ wanted an iPhone until they had one.

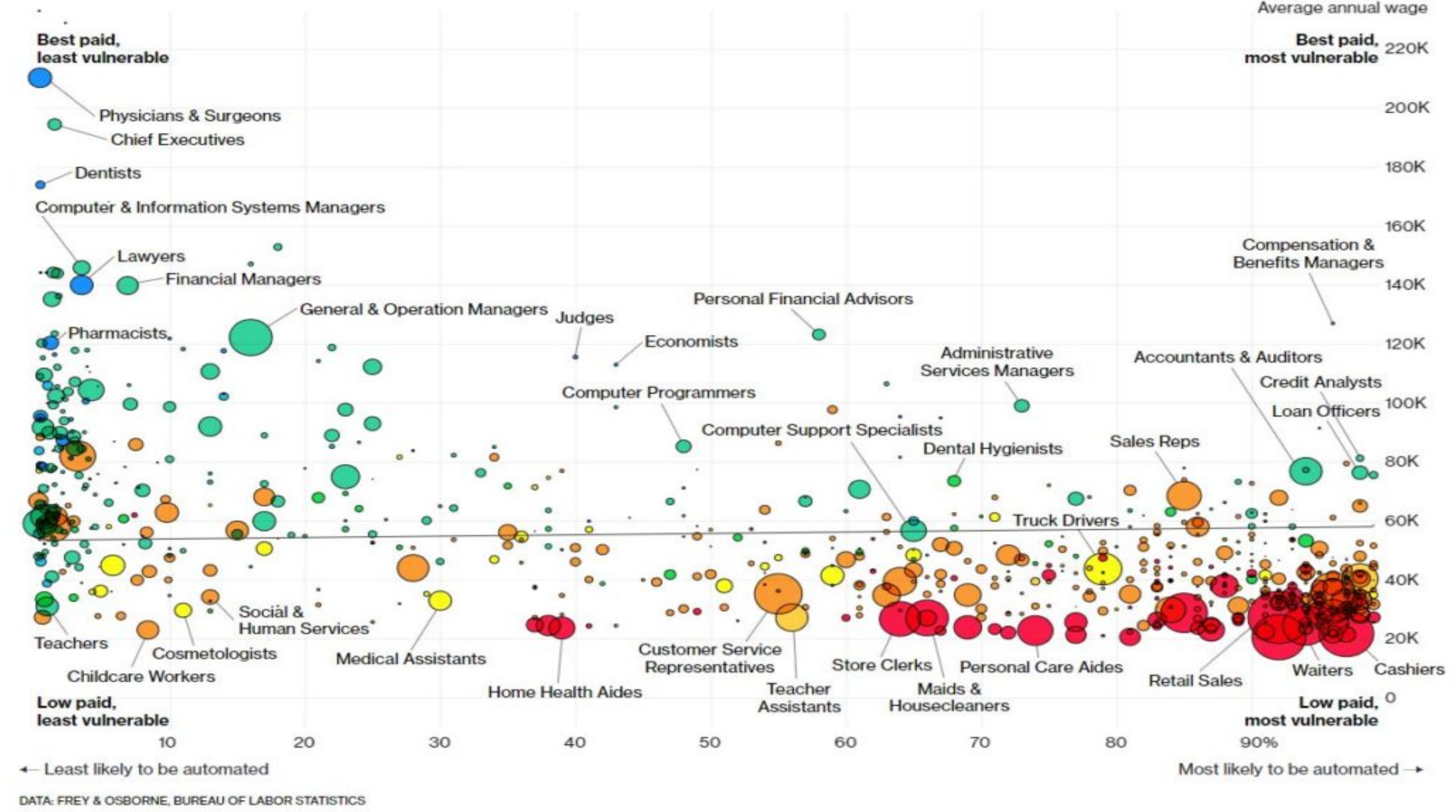
THE JOBLESS FUTURE

What about lawyers?

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

New technologies, such as driverless cars and 3-D printing, will eventually replace most workers.

What jobs will be replaced in the court and tribunal sector?



DATA: FREY & OSBORNE, BUREAU OF LABOR STATISTICS

Least Vulnerable Jobs

LIKELY TO CHANGE WITHIN FIVE YEARS

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.

Many jobs can be replaced but many will have parts of their work automated (select task automation).

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

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

Automated, responsive devices will replace some people.

WHAT ELSE?

Changes Specific to DR Areas?

Knowledge based jobs are not safe

- Doctors, lawyers and judges face considerable changes. It is more likely that judges will be affected than some lawyers (higher % risk).

Some jobs are already being replaced

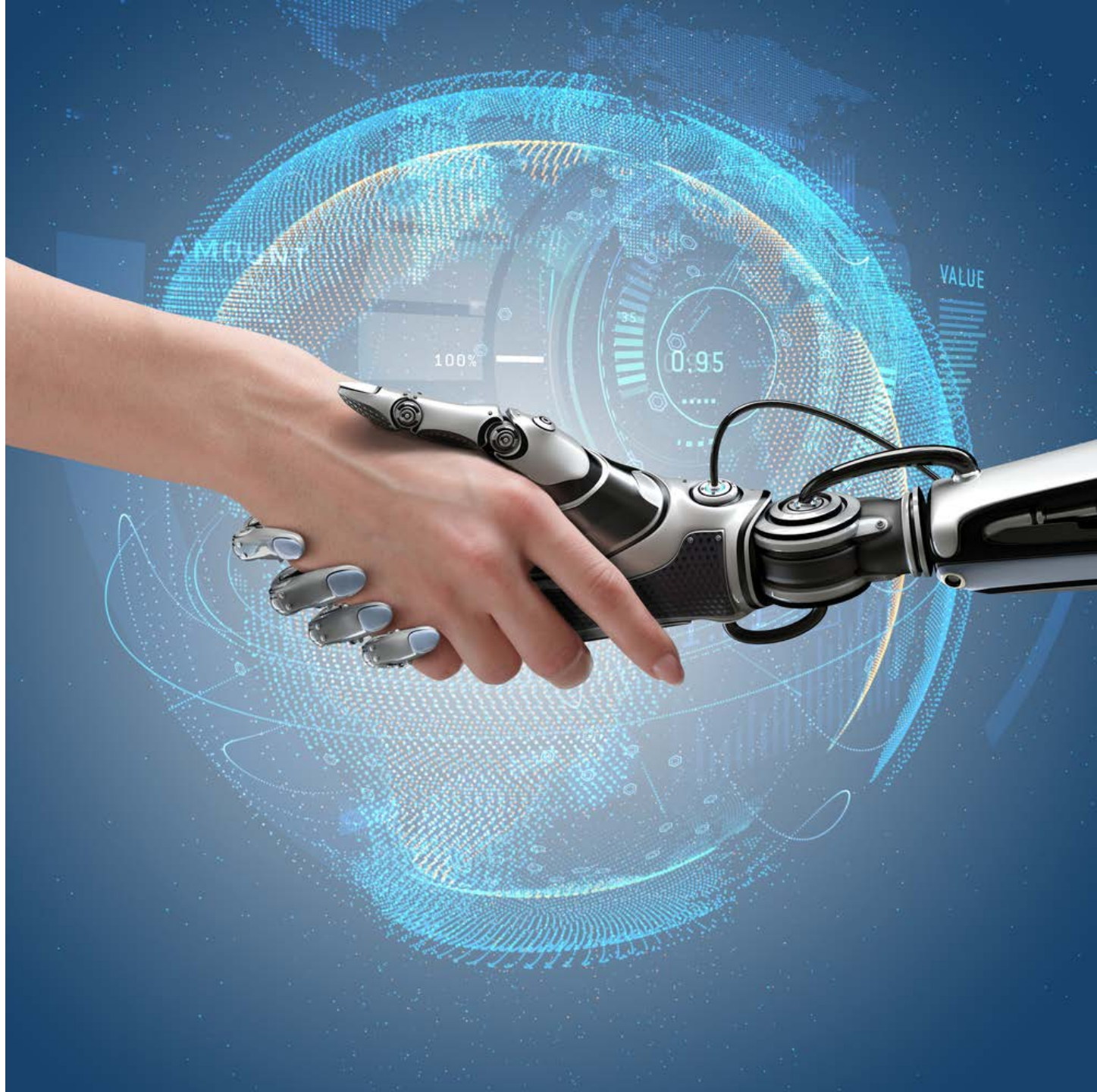
- Expert radiologists are routinely outperformed by pattern-recognition software, diagnosticians by simple computer questionnaires.

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

Big 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 – new insights – we currently little idea about who uses courts or tribunals.

- Project 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:

- predict 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 – Short term and now

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. For further Information

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