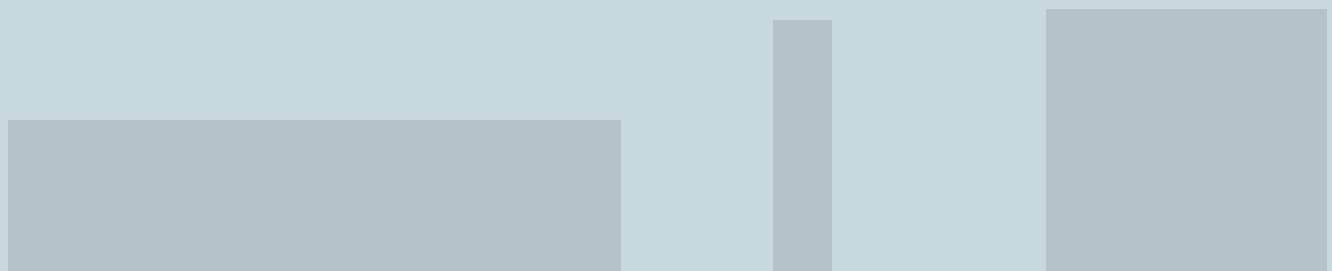# Perspectives

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## Future of financial services

**Disruption through technology, regulation and consumer choice**

Could online shopping, ride-sharing, peer-to-peer and other technology platforms be answers to our financial services needs in the future?

Financial services sector is facing a disruption like never before. Willis Towers Watson conducted a research that showed that up to 54% of jobs may be disrupted in the financial services over the next 20 years[1]. There are three mega trends responsible for this change: technology, regulations and consumer choice (*Figure 1*).

## Technology blurs the line between industries

The Fourth Industrial Revolution has brought to the fore technologies such as blockchain, artificial intelligence (AI), robotics and automation, Internet of Things (IoT) and analytics, to name a few. The convergence of these technologies and its effects are already being felt, with the advent of robo-advisers in wealth management, online-only banks, peer-to-peer funding, and the rise of cryptocurrency. All of these are leading to faster and more transparent

Figure 1: **Key drivers impacting the financial services sector**

| Technology | Regulatory | Consumer choice |
|---|---|---|
| Digitalisation and analytics | Know your customer | Personalised product and services |
| Blockchain disruption | Anti-money laundering | Changing demographics and spending patterns |
| Cloud based platforms | Personal data | Alternative technology platforms |
| Artificial intelligence | Cryptocurrency regulations | Service excellence and seamless experience |
| Automation and robotics | Disintermediation and DAOs (decentralised autonomous organisations) | Shared economy |
| Internet of things (IoT) | | |
| **Risks** | | |
| Economic uncertainty | Cyber security | Stricter overall compliance and regulatory requirements |

[1] The future of financial services: how work is impacted by the connection and convergence of people and technology, Willis Towers Watson, 2017

transactions, as well as removing middlemen.

Digitalisation and automation may put many jobs at risk (*Figure 2*), but perhaps a larger, more conceptual, concern to traditional financial services organisations is that these technological advancements also blur lines acr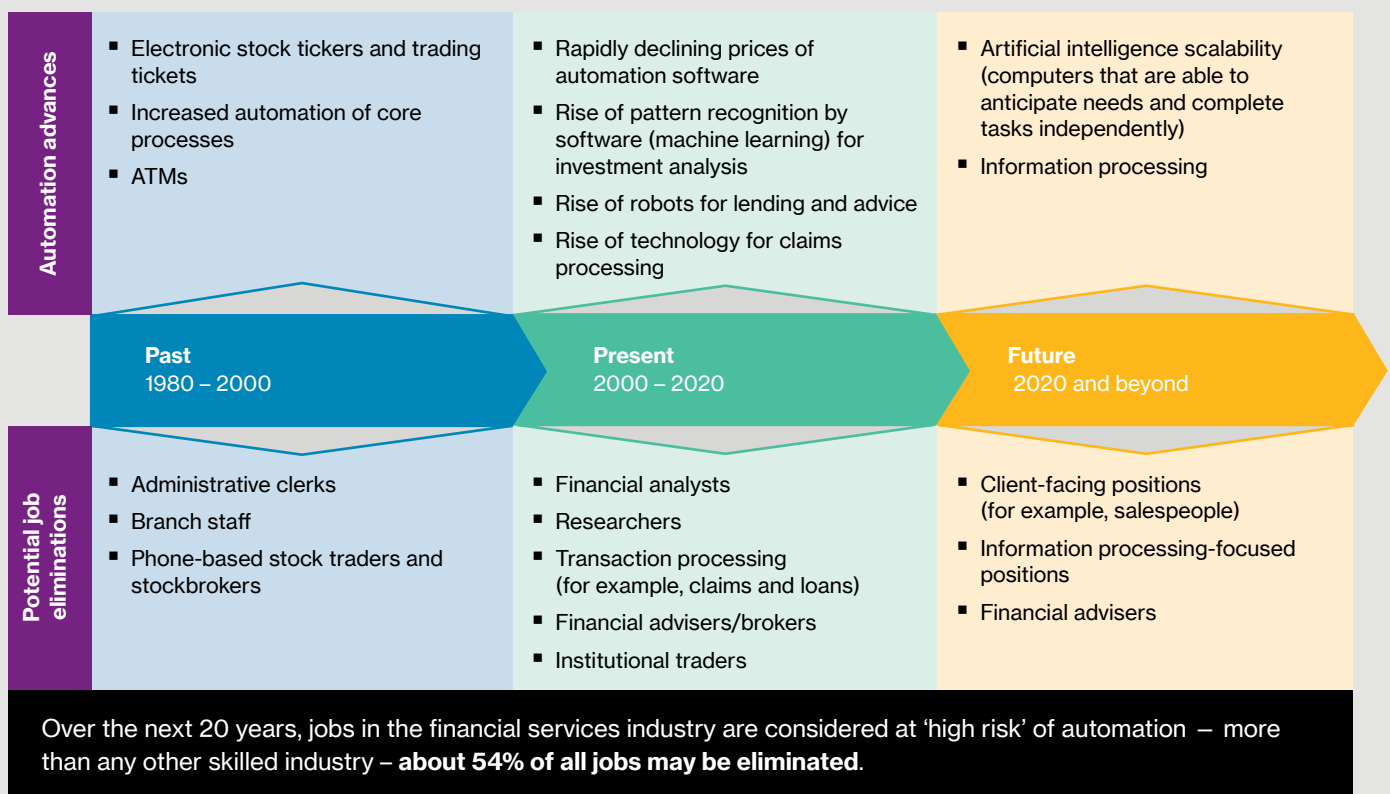oss sectors and make it easier for new players make a foray into the industry. These new players challenge the very idea of traditional financial services.

Example closer to home is Indonesia's ride-sharing startup Go-Jek. Go-Jek captured its user base through an initial value proposition of low-cost ride-sharing on motorcycle taxis. It now offers a menu of services on its platform from bill payment to medicine deliveries[1]. In 2017, Yu'E Bao, an investment product offered through the Chinese e-commerce giant Alibaba's third-party payment affiliate, Alipay.com, surpassed J.P. Morgan Chase's U.S. government market fund to become the world's largest money market fund. Currently Yu'E Bao manages total assets of more than $233 billion[2].

Globally, Amazon is already exploring options to offer banking services to its customers[3]. Google also launched Google Pay, which allows users to make payments in apps, on websites and in stores[4]. Change is coming faster than most of us can imagine.

Figure 2: **Automation and digitalisation are affecting financial services**

| Automation advances | Past 1980 – 2000 | Present 2000 – 2020 | Future 2020 and beyond |
|---|---|---|---|
| **Automation advances** | ▪ Electronic stock tickers and trading tickets<br>▪ Increased automation of core processes<br>▪ ATMs | ▪ Rapidly declining prices of automation software<br>▪ Rise of pattern recognition by software (machine learning) for investment analysis<br>▪ Rise of robots for lending and advice<br>▪ Rise of technology for claims processing | ▪ Artificial intelligence scalability (computers that are able to anticipate needs and complete tasks independently)<br>▪ Information processing |
| **Potential job eliminations** | ▪ Administrative clerks<br>▪ Branch staff<br>▪ Phone-based stock traders and stockbrokers | ▪ Financial analysts<br>▪ Researchers<br>▪ Transaction processing (for example, claims and loans)<br>▪ Financial advisers/brokers<br>▪ Institutional traders | ▪ Client-facing positions (for example, salespeople)<br>▪ Information processing-focused positions<br>▪ Financial advisers |

Over the next 20 years, jobs in the financial services industry are considered at 'high risk' of automation – more than any other skilled industry – **about 54% of all jobs may be eliminated**.

Source: Willis Towers Watson Analysis and "The Robots are Coming for Wall Street", The New York Times Magazine, Nathaniel Popper

[1] Indonesia's Go-Jek is bringing fintech to the last mile and most aren't paying attention, Medium, March 7, 2018, Stephen Deng
[2] HEAD-TO-HEAD: Tianhong vs JP Morgan, Fund Selector Asia, March 9, 2018, Francis N. Acosta
[3] Amazon provides glimpse of the future of banking, Euromoney, March 8, 2018, Kimberly Long
[4] Google pay is now available in 28 countries, thanks to Chile, France, Android Authority, December 11, 2018, Hadlee Simons

## Applications of blockchain

Blockchain's ability to create distributed immutable records, reduce hacking and create trust over remote distances will make it a valuable tool for banking, insurance and many other fields. Blockchain will succeed in removing the underlying impediments that have long created delays and annoyances in our daily lives — middlemen and processing delays.

| Peer to peer insurance | Loans and peer to peer lending | Wire transfers and international payments |
|---|---|---|
| **Use of digital auto record ledger and AI** | **Use of blockchain-based syndicated loan system** | **Use of cryptocurrency** |
| ■ Underwriting algorithm to determine the best rate for the insured<br>■ 'Smart Contracts' to evaluate and pay claims automatically | ■ Immutable record of every alteration made in the loan agreement documents in real-time<br>■ Allows everyone to commit remotely simultaneously | ■ No delay on the purchase of foreign currency<br>■ No charge from banks for the transfer<br>■ No need for input of wiring instructions |
| **Reduces the reliance on insurance agents and claims processing personnel** | **Faster processing of loans and hence few loan processing clerks needed** | **Reduces middlemen across banks required for such transactions** |

## Technology changes the way we work

Technology areas ranging from artificial intelligence, robotics, blockchain technology and telematics are changing the way financial institutions interact with customers, the new and customised products they offer and even how they use technology to deliver the service and get work done internally.

Technology and automation are empowering in that they can:

■ Make routine or administrative tasks less error prone

■ Enable quicker processing

■ Open up supply and service chains to be more accessible and flexible

As such, organisations can deconstruct current jobs into smaller tasks or projects, and tap into a range of sources for getting that work done — from robotics, AI, and machine learning to workers on talent platforms, contractors and alliance partners.

To accomplish this, tasks can be grouped into three buckets (*Figure 3*):

■ Routine cognitive or routine manual work that needs to get done on a regular basis

■ Non-routine tasks that require some level of intelligence or insight

■ Tasks that require a "human touch" – empathy, creativity and innovation

A 2017 Willis Towers Watson analysis found that financial services organisations that deconstruct jobs in this manner can typically realise savings of between 60% and 80%[1].

The following metrics can be helpful in the evaluation of most feasible options:

■ **Speed to capability:** How do we develop new capabilities as quickly as possible, recognising how rapidly competitive advantage can be dissipated?

■ **Cost:** How do we acquire new capabilities as efficiently as possible – that is, with an optimal mix of fixed and variable costs?

[1] The future of work in Financial institutions, Ravin Jesuthasan, 2017

Figure 3: **Work strategy: Optimising resources for the type of tasks**

| Type of task | Traditional | Transformed |
|---|---|---|
| **Routine cognitive or routine manual work that needs to be done on a regular basis** | **Manual processing**<br><br>Tedious, time-consuming and error-prone | **Using a combination of AI, big data and cognitive analysis**<br><br>Fast, efficient and accurate information processing |
| **Non-routine tasks that require some level of insight and intelligence** | **In-house talent/specialists**<br><br>Costly, fit-for purpose | **Contingent pool of specialists**<br><br>Specialised, efficient, minimal cost burden |
| **Tasks that require a human touch, empathy, creativity and innovation** | **Responsible for all end-to-end tasks**<br><br>Time spent on manual tasks in addition to client needs; less focus on customized service | **Focusing on value-add tasks and client needs**<br><br>Automation of manual tasks, more time spent on understanding client needs and delivering creative products |

- **Risk:** How do we develop new capabilities by taking on as little risk as possible? Risks can fall under two aspects: "lack of control", particularly as work moves outside the organisation, and the risk of obsolescence.

## Stricter regulations are prompting financial institutions to consider automation[1]

Another driving force that is compelling financial services firms to deconstruct jobs and explore new options for getting work done is regulatory compliance. Compliance processes can be costly, labour-intensive and prone to error, however, they are also relatively susceptible to automation. Many institutions are combining big data analysis, robotic process automation (RPA) and machine learning, to automate compliance processes.

Regulatory activity can be grouped into four main categories, and automated accordingly:
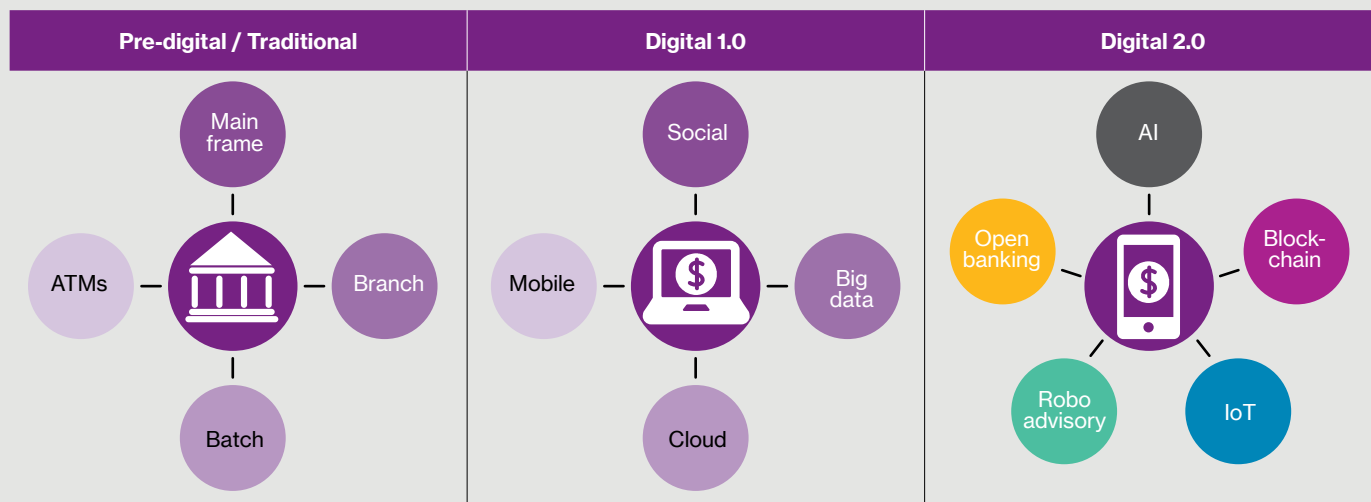
- **Automated advice:** A robo-adviser could significantly reduce (but not eliminate) what firms pay lawyers and compliance specialists for authorisation advice and to navigate the maze of legislation and regulatory rulebooks.

- **Regulatory monitoring:** Several sophisticated data scraping and sentiment analysis tools exist that could be deployed by regulators for automated monitoring to understand consumer opinions, concerns and level of trust and to identify market abuses.

- **Regulatory reporting:** Application interfaces allowing to tap on functionality and data with each other (APIs), online communication, big data analytics and distributed ledger technology can help

auomate compliance and regulatory reporting to an equivalent form of 'straight through processing'.

- **Regulatory policy:** Smart contract technology can digitise and codify regulations; then computational modelling (such as agent-based systems) can assess the potential market impact of a regulatory proposal before deployment.

[1] The future of financial services: how work is impacted by the connection and convergence of people and technology, Willis Towers Watson, 2017

Figure 4: **Impact of technology on banking value chain**



| Pre-digital / Traditional | Digital 1.0 | Digital 2.0 |
| --- | --- | --- |
| Main frame, ATMs, Branch, Batch | Social, Mobile, Big data, Cloud | AI, Open banking, Block-chain, Robo advisory, IoT |

## The banking value chain is evolving to meet changing consumer needs

While technology provides solutions to deconstruct jobs, reduce costs, increase efficiency and reduce the burden of errors, it also provides opportunities for new entrants, and hence disrupts the traditional financial services business model (*Figure 4*). New players across all parts of the value chain in financial services are providing consumers with a wide variety of choices.

*Figure 5* shows the new options available to consumers of each point in the financial services value chain, from taking financial decisions to buying financial products and new methods of payment.

## Understanding the new talent landscape

All these changes — technological, regulatory, and increased consumer choice — will create ripples in the talent landscape. The roles that will grow in importance will include those that focus on understanding

consumer behaviour; building and maintaining long-term relationships, providing empathy and value-added advisory; and applying technology to solve challenges. On the other hand, transaction-based, routine and repetitive roles may become redundant.

In future we will see more jobs that will:

- Create innovative and customised products, as well as bundling bespoke products
- Create a seamless customer experience across digital platforms
- Develop insights on customer spending patterns and transaction experience
- Improve overall process efficiency
- Maintain long-term relationships and provide value-added advisory
- Develop underwriting solutions based on cognitive computing technologies
- Understand specialty insurances such as cyber risk, drone-covers, long-term care, personal data etc.
- Are risk management and

compliance related roles that understand regulatory environment, potential changes and impact on operations and that enable use of technology analytics to support monitoring, detection and prevention of regulatory non-compliance

And less of the jobs that will:

- Conduct routine transactions or provide routine low-value added advisory such as call-centre agents, telesales etc.
- Conduct underwriting and processing for insurance agreements and claims
- Are involved in trading as machine learning may replace human judgement, which are prone to error

Figure 5: **New players across all parts of the value chain are providing consumers choice**

## Helping clients take decisions

| Online comparison sites | Financial advisors | Personal finance |
|---|---|---|
| ■ Bankrate.com<br>■ FindBankRates<br>■ Kanetix.ca<br>■ Bank Tracker<br>■ Compare the Market<br>■ Confused.com<br>■ Money Supermarket<br>■ iSelect | ■ Learnvest<br>■ MarketRiders<br>■ Jemstep<br>■ Personal Capital<br>■ Planwise<br>■ FlexScore | ■ Mint<br>■ HelloWallet<br>■ Kontoblick<br>■ Toshl Finance<br>■ OnTrees<br>■ Money Dashboard<br>■ Tink<br>■ AFAS |

## Reducing cost of transactions in a collaborative environment

| Social lending | Crowd-funding | Social investing |
|---|---|---|
| ■ Prosper<br>■ Primarq<br>■ LendingClub<br>■ Fixura<br>■ Zopa<br>■ Auxmoney | ■ Kick Starter<br>■ Crowdrise<br>■ Crowdfunder<br>■ Crowdcube<br>■ Invesdor<br>■ RocketHub<br>■ CrowdRise | ■ Tradeking<br>■ StockTwits<br>■ Covestor<br>■ Ditto Trade<br>■ Ayondo<br>■ Unilence<br>■ Wikifolio<br>■ TradeHero |

## Alternative services

| Money change P2P | Virtual money | Social insurers |
|---|---|---|
| ■ Azimo<br>■ P2P Cash<br>■ KlickEx<br>■ CurrencyFair<br>■ TransferWise<br>■ Xendpay | ■ Xendpay<br>■ Xoom<br>■ P2PCash<br>■ KlickEx<br>■ TrasferWise<br>■ CurrencyFair | ■ jFloat<br>■ Friendsurance<br>■ PeerCover |

## New payment methods

| POS | Mobile payments | Wallet |
|---|---|---|
| ■ QuickBooks GoPayment<br>■ SumUp<br>■ iZettle<br>■ Paymate<br>■ Jusp | ■ Dwolla<br>■ TabbedOut<br>■ Boku<br>■ Clover<br>■ LevelUp | ■ Apple Pay<br>■ Visa Checkout<br>■ Masterpass<br>■ PayPal<br>■ Google Wallet<br>■ C2FO |

## Services to companies as an alternative to banks

| SME finance | Wholesale money change | Improvement solutions |
|---|---|---|
| ■ Kabbage<br>■ iwoca<br>■ Realty Mogul<br>■ CAN Capital<br>■ OnDeck<br>■ AngelList<br>■ Slated | ■ Currency Transfer<br>■ Currencycloud<br>■ Kantox | ■ Xero<br>■ Vend<br>■ Kounta<br>■ Braintree<br>■ Xpenditure<br>■ Expensify<br>■ Enloop |

## Replacing traditional banking

| Digital banking | Wealth management | Exclusively digital insurers |
|---|---|---|
| ■ GoBank<br>■ Hello Bank<br>■ Simple<br>■ RocketBank<br>■ Knab<br>■ SmartyPig<br>■ Fidor bank<br>■ Ubank | ■ Betterment<br>■ FutureAdvisor<br>■ Wealthfront<br>■ SecondMarket<br>■ rplan<br>■ Nutmeg<br>■ Vaamo<br>■ Money on toas | ■ Insurethebox<br>■ iKube<br>■ Coverbox<br>■ Metromile<br>■ Kroodle |

Source: The Valley Digital Business School

## How can financial services companies prepare for change?

Technological disruption is set to bring exciting changes to the financial services industry. In order to stay competitive, be able to provide the right type of products and services, and ensure error free and efficient operations, companies will need to reinvent how work will get done in the future. To resolve these challenges, it is important for companies to address the issue at the source — by reinventing jobs and realigning people to work.

There are four components to reinventing jobs (*Figure 6*):

1. **Deconstruct jobs:** Deconstruct jobs into their activities and classify the various tasks

2. **Re-evaluate:** Assess the best way to automate tasks and redeploy them by alternate means (technology or human-automation solutions)

3. **Optimise work and reconstruct jobs:** Look at activities collectively and reconstruct into (new) jobs where it makes sense, taking into account the new means of accomplishing the work and what the new work distribution between talent and technology requires

4. **Reskill talent:** Identify skills needed for the future vision of the work and reskilling pathways for talent whose work is being transformed by automation

The financial institutions will need to adapt to the changing environment quickly or face extinction at the hands of faster, more agile and responsive new players.

Figure 6: **Optimising how work is done by reinventing jobs \***
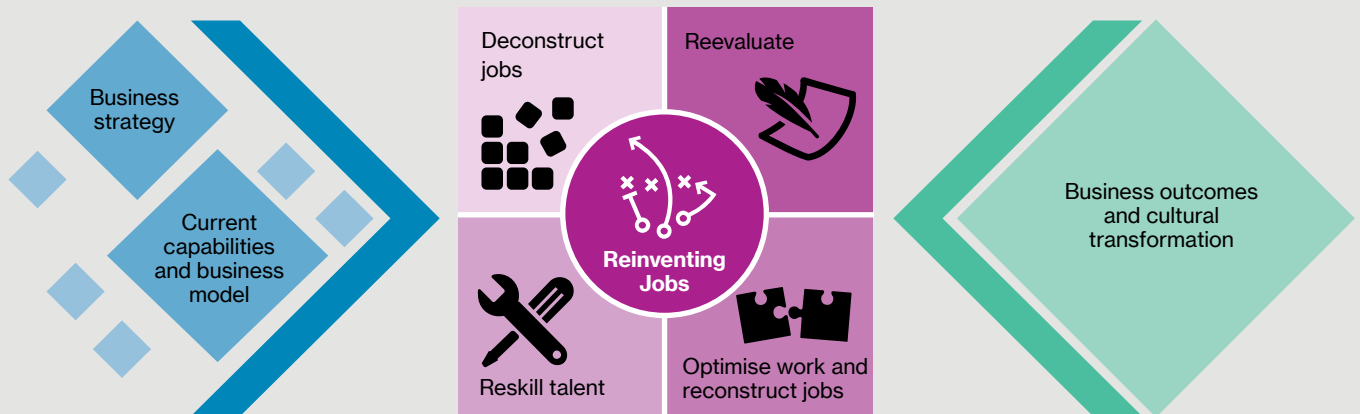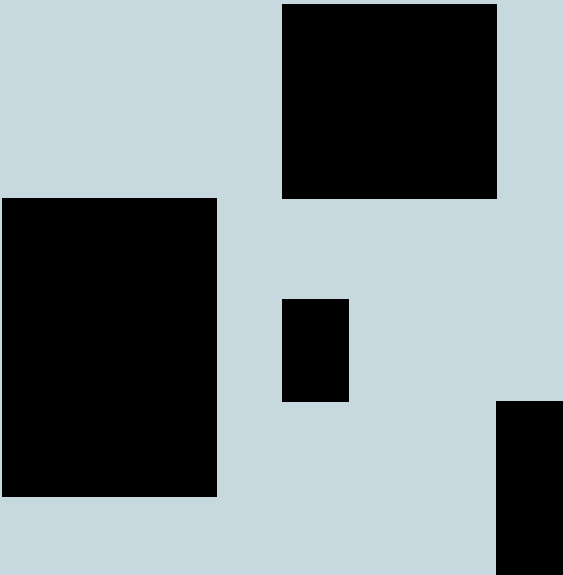


* Willis Towers Watson's approach to reinventing jobs

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