



Algorithms versus the temporary employment sector

Is there a future for temporary employment agencies?

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Introduction

The traditional temporary employment sector has been helping to recruit and select suitable workers for decades. This is still largely done offline and by people. Today there are several online business models that digitise specific tasks of the temporary employment sector. Platforms such as Uber and Deliveroo (transport), Temper (catering work) or LinkedIn (recruitment) are examples of this. Technology makes it possible for them to fulfil multiple roles: they 'market' jobs and are at the same time intermediaries in flexible employment relationships. The online platforms help to make recruitment and selection faster and cheaper. As a result of technological innovations, there is more automated matching.

So this publication centres on the question:

'Will we still see traditional players in the future like temporary employment and secondment agencies, or will online work platforms - the spinoffs of Uber or LinkedIn - take over the role of the temporary employment sector?'¹

In this publication we investigate which part of the temporary employment sector market is at stake because of these work platforms. We do this by first discussing the role of the traditional temporary employment sector and the rise of online business models (Chapter 1). Next, we estimate the extent to which the work platform can displace the temporary employment sector by analysing what share of the market work platforms will be able to claim. (Chapter 2). Finally, we describe how the traditional temporary employment sector can continue to be of value in the future (Chapter 3).

1 This report is written from the perspective of the current temporary employment sector and therefore pays limited attention to the wide-ranging social consequences of work platforms. We will analyse these elsewhere.

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Conclusion

Work platform puts pressure on temporary employment sector

Temporary employment agencies, secondment agencies, payroll companies and recruitment agencies ('the temporary employment sector') basically fulfil three roles for customers:

 Recruitment and Selection (R&S)

 Risk limitation

 Administrative 'unburdening'

Especially with regard to the first role, work platforms - the more developed versions of Uber, Deliveroo or LinkedIn - are putting the industry under pressure. Recruitment and Selection is now still often done by people, but this will become more automated as technology develops. As a result, recruitment and selection will become cheaper and quicker. The quality of ratings will rise and ultimately a work platform will determine the 'right' remuneration (for example through an auction or dynamic prices). So it will be easier for a platform to organise shorter contracts.

Work platforms will not take over the second role under the current regulations. Future rules will determine whether or not this will continue to be the case.

'Unburdening' (for example time tracking administration and remuneration) will become more digitised and automated. For complex contracts with larger clients, traditional players have a head start at first, but this will gradually disappear.

The likelihood of 'platformisation' differs per profession

Whether work can be mediated through a platform differs per profession. The likelihood is high in professions:

- Where 'platformisation' offers many benefits
- That are relatively easy to 'platformise'

Platform-sensitive professions have the following characteristics:

Greater benefits from	High staff turnover: frequent demand for R&S
	Peaks and troughs in demand
	Imbalance between supply and demand
	Great quality difference between workers
Easier when there is	Simple and repetitive work
	Remote work

Professions that are most likely to be 'platformised' and where the temporary employment sector stands relatively much to lose are, for example, cleaners, kitchen assistants, drivers and shelf stackers, and also software developers who can 'auction' their scarce talent and earn more.

The pace depends on technology and rules

Work platforms can win market segments faster if:

- Technology develops faster (quality and opportunities offered by work platforms increase)
- Rules reduce the complexity and risks of independent contractor or employment contracts (work platforms then do not need to have knowledge of regulations)

Market share of temporary employment sector is at stake

Contracts	Technology develops	
	slow	fast
simple and low-risk		Large part of the market shifts to platforms
complex and high-risk	Small part of the market shifts to platforms	

We anticipate that in the coming ten years, at least 20% of the work that currently goes through the traditional temporary employment sector could shift to work platforms. In an extreme scenario in which technology develops quickly and rules drastically reduce the risks and complexity of employment and/or independent contractor contracts, up to 70% of the market share in the Netherlands could shift.

Tech players and temporary employment sector are both building platforms

Platform giants like Google and Facebook might decide to enter the work market. But the industry is not passive and is building its own platforms. Who 'wins' depends on three factors: technology, the network and regulations. With regard to the first, the platform players have the advantage. They also have a large network and the (financial) capacity to scale up, but the temporary employment sector has more access to large clients. Finally, the temporary employment sector will benefit from rules that create a level playing field for employees and independent contractors.



Chapter 1 | Online (r)evolution in the temporary employment sector

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1.1 Dutch temporary employment sector facilitates 1 in 10 work relationships

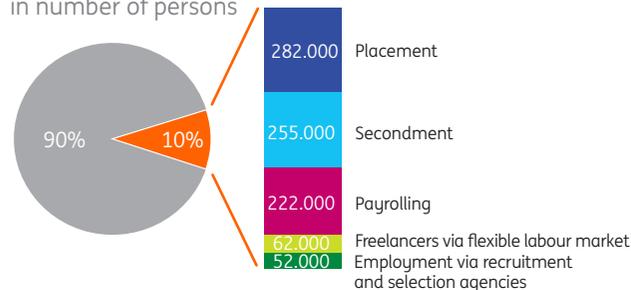
Platforms entering the work market. To find out how this affects traditional players, we first look at their **current** value proposition and how this differs per segment in the sector.

Temporary employment sector serves 10% of the work market

On average the Dutch temporary employment sector facilitates 1 in 10 work relationships. The industry does this through temporary employment and secondment agencies and payroll constructions, independent contractor mediation and assisting with the recruitment and selection of staff. More than 60% of the services regard temporary work and the secondment (of people). Payroll services, at 25%, are also a major service. The temporary employment sector also acts a mediator for independent contractors who, for example,

Placement, secondment and payrolling are the most important

Share of flexible job market in total Dutch labour market in number of persons



Source: CBS, ABU, Intelligence Group ZEA 2017, processing by ING Economisch Bureau

offer their own work and people seeking a regular job.

Temporary employment sector has three core tasks

The temporary employment sector fulfils three roles:

1. Recruitment and selection: from publishing job vacancies to selecting a suitable candidate (assessment) and helping to determine the remuneration.
2. Limiting risks: temporary employment agencies, secondment agencies and payroll companies take over the role of employer and the accompanying risks such as illness and incapacity for work. The average contract length is also shorter. The industry also guarantees that customers comply with employment regulations.

3. Administrative 'unburdening': by taking on responsibility for tasks such as payroll administration and training workers, the industry saves the customer time.

The temporary employment sector is diverse

Temporary employment and secondment agencies help with recruitment and selection, risk limitation and 'unburdening'. Recruitment and Selection agencies (R&S agencies) limit their activities to recruitment and selection while payroll companies only limit risks and unburden. The differences between the players are illustrated in the table below. In the next chapters we show that the impact of work platforms therefore also differs per type of player.

Value proposition of the temporary employment sector



Activities	Recruitment and selection	Risk limitation	Unburdening
	<ul style="list-style-type: none"> • Awarding contract • Recruitment, selection and pre-selection 	<ul style="list-style-type: none"> • Contract length • Employer's role 	<ul style="list-style-type: none"> • Scheduling • Offline coaching
	<ul style="list-style-type: none"> • Assessment • Remuneration 	<ul style="list-style-type: none"> • Knowledge of regulations 	<ul style="list-style-type: none"> • Administration • Feedback

Value proposition differs per type of player

Type of player	Recruitment and selection	Risk limitation	Unburdening
Temporary employment agencies	✓	✓	✓
Secondment agencies	✓	✓	✓
Payroll companies		✓	✓
Recruitment and selection agencies	✓		
Independent contractor agencies	✓		✓

1.2 Dutch temporary employment sector: online (r)evolution?

Today there are several online business models on the work market. Vacancy websites started the online (r)evolution, followed by online social networks, 100% online employment agencies and work platforms. We describe four phases in the development of online business models on the work market. On the following page we show which new players have emerged over time and how they benefit the work market.

Online business models: from information portal to one-stop shop for the work market

Phase 1
Online information portals increase transparency

Vacancy sites and aggregators are entering the market. They mainly serve as information portal for vacancies and CVs. The quality of these has increased over time due to, for example, them providing **smarter search and filter functions**. Aggregators are getting better at **collecting information from websites and are increasing in scale**; for example, now they browse the 'work at' sites of companies directly.

Phase 2
The traditional temporary employment sector is digitising

The digitisation of the **traditional temporary employment sector** is still in full flow. It is now the norm to create an **online profile at an employment agency** and to search and apply for vacancies online. There are even online employment agencies now that provide **all their services online**. Morgenwerk.nl that started in 2012 is one of these.

Phase 3
Smart technology automates recruitment and selection

Recruitment and selection is increasingly automated. Entrance of **smart technological solutions**. LinkedIn is getting increasingly good at making **suggestions** regarding connections and vacancies in your field of interest. Aggregator **Google for Jobs** uses **self-learning algorithms** to make increasingly relevant matches.

Phase 4
Rise of the platform as a one-stop shop for the jobs market

Work platforms such as Uber are relatively new on the market. The **automated online matching** of supply and demand is key. They also 'unburden' by, for instance, facilitating **the conclusion of an agreement** and the **payment**. In addition they make visible quality on the market through a **rating system**. In brief: work platforms are increasingly becoming the **one-stop shop** of the work market.

Phase 5
Work platforms as a replacement for the traditional temporary employment sector?

The continued development of work platforms will result in them taking over more and more tasks from the traditional temporary employment sector in the future.

1.3 Increasing numbers of online work platforms

Examples of online business models on the labour market

Job vacancy site:
online job vacancy and CV database increases transparency and **lowers search costs**



Job vacancy aggregator:
mega-database **lowers search costs** even further



Social network:
lower search costs due to online network and **insight into quality** based on ratings



Online placement:
lower (search) costs and **faster processing** due to online service provision



Work platform:
significantly reduces **search costs** by performing matches more automatically, uses apps for **fast processing**, makes **quality visible** using ratings and dynamic/more dynamic **pricing**



1995

2000

2005

2010

2015

2018

1 No longer active

2 Started under the name Developerauction.com

1.4 Work platform for independent contractors, temporary workers or jobseekers

	 TEMPER: freelancer platform provides insight into quality	 ADIA²: placement platform cheaper for SMEs	 HIRED.COM: the best IT talent through auctions
 What type of platform?	Job platform Freelancer contract No employer	Placement platform Placement contract Platform is the employer	Recruitment & Selection ³ platform Employment contract Platform is the employer
How does the platform assist with...	<ul style="list-style-type: none"> Platform for hospitality jobs and recently also for volunteer work Operates in the Randstad conurbation Employers primarily SMEs (94%) 40,000 freelancers, 400 weekly active employers (growing daily) 	<ul style="list-style-type: none"> Platform for temporary agency work in the hospitality, logistics, retail and education sectors Operates in DE, UK and CH since 2017 Employers primarily SMEs 	<ul style="list-style-type: none"> Platform for IT job vacancies, particularly focused on professions with scarce labour supply Operates in 13 cities in the US, CA, UK and FR Employers are listed or have sufficient market capital Exclusive platform: only the top 5% of the 70,000 monthly applicants are admitted
 recruitment and selection?	<ul style="list-style-type: none"> Employer posts jobs and sets hourly rate Freelancer in hospitality sector conducts own searches and responds to hospitality jobs via platform (there are filters, but no automatic matching) Evaluations provide indication of quality of freelancers and employers 	<ul style="list-style-type: none"> Employer posts jobs and sets hourly rate Personal first screening on registration, online processing after this Potential candidates automatically receive a message with relevant assignments on the basis of location, experience and availability Evaluations provide indication of quality of freelancers and employers 	<ul style="list-style-type: none"> Company posts job vacancies, job seekers create online profile Pre-selection is partially automatically performed by algorithms and partially by 'Talent Advocates' Selected candidates appear in 1-week online auction; employers see relevant candidates on the basis of location, experience and availability Companies respond in the form of a 'bid' (salary et al, employment conditions) Auction system helps candidates to exploit their strong negotiating position
 reducing risks?	<ul style="list-style-type: none"> Not applicable. Temper does offer model contracts for employer and employee 	<ul style="list-style-type: none"> As temporary employment agency Adia takes over the employment risks and safeguards compliance with legislation 	<ul style="list-style-type: none"> Not applicable to recruitment and selection of direct employment contracts⁴
 making things easier?	<ul style="list-style-type: none"> Incl. time recording, invoicing and processing payments 	<ul style="list-style-type: none"> Incl. system for time recording, invoicing, factoring and processing payments; automatic reminders for shifts 	<ul style="list-style-type: none"> Company can sometimes integrate own Applicant Tracking System (ATS) with Hired platform⁴
Platform's benefits	<ul style="list-style-type: none"> Ratings provide insight into quality of freelancer and employer Improved negotiating position for freelancers: 7.2% increase in hourly rate in 2017¹ Platform contributes to freelancer's autonomy and increases options Platform increases flexibility of employer's labour capacity 	<ul style="list-style-type: none"> Rating provides insight into quality of freelancer and employer SME via online platform benefits from lower rates for temporary agency workers and faster turnaround times Fast turnaround time gives temporary agency workers more options 	<ul style="list-style-type: none"> Strict admission criteria safeguard the quality of job seekers Workers are in a better position to exploit strong negotiating position through auction system IT companies incur lower search costs through Hired.com and have faster access to high-quality candidates
	1 Average increase between 1 January and November 2017 2 Owned by Adecco; developed in collaboration with Infosys	3 Focus on direct employment, although Hired.com also facilitates secondments and freelance contracts 4 In case of freelance contracts, Hired.com provides a full-service solution; and in case of secondments, Hired.com provides a full-service solution and acts as employer	

1.5 Work platforms make faster, cheaper and better matches

There are several online business models active on the work market. In this publication we look specifically at **work platforms – the further developed versions of Uber, Temper or Hired.com**. What long-term effects will these have on the work market?

1 | A platform reduces transaction costs



The platform automatically matches supply and demand on the work market. This reduces search costs. Because the completion takes place digitally, the transaction is also cheaper: acts such as 'conclude contract' and payment are all facilitated through the app. This even makes it profitable to conclude relatively small agreements.

Benefit: quicker and cheaper matching

For small jobs it is sometimes too much work to search for a buyer/supplier. For example, imagine someone wants to work three hours a day but is unaware that the supermarket in the next village is looking for someone to work precisely three hours a day. The supermarket is less likely to recruit a suitable candidate than for a job for six hours a day; it is not worth the money or the effort. Neither is it profitable to engage the temporary employment sector for very small jobs, even though the scale and network of the industry mean that it would find a match quicker and more cheaply than the supermarket. A platform **reduces transaction costs even further**: through the online platform the supermarket and the jobseeker can find each other more quickly and conclude an agreement immediately. A work platform therefore makes **shorter contracts profitable** and will cause supply and demand for short contracts to go up.

2 | A platform makes quality visible by way of ratings



The platform uses ratings to provide insight into a 'worker's' quality. The information asymmetries are reduced: Without such a rating it is hard for an instructing party to assess beforehand whether a person delivers good work. The question still remains as to what the value of a review is: for a taxi ride, for example, the quality of the driver can be indicated with a number of stars, but can this also be done for a lawyer or for a designer? And will the ratings be objective or will they discriminate? Although these questions are now very relevant, we expect that over time quality criteria will become so strict that a rating system will even be workable for specialist work.

Benefit: a better match, quality pays

Ratings now make it possible for new entrants to prove their reliability on the market (think of the Uber drivers who are reliable by ratings), without a 'quality stamp' from an **intermediary** (taxi centre or employment agency) being needed. Over time the platform makes the **quality** of buyers and suppliers in terms of work **transparent** and thus **helps** users to find **a good suitable match**. Talented workers will stand out more; this allows them to **translate quality into a higher price**.

3 | A platform makes prices more dynamic



Platforms use algorithms. These algorithms can also help to ensure prices reflect the relationship between supply and demand as well as possible. For instance, in some places Uber journeys are more expensive when it is busier. Another price mechanism on platforms is the auction, such as on eBay or on Hired.com: not the platform, but the bidder determines the price.

Benefit: the platform can fix a better price

In principle a platform makes dynamic pricing possible: **prices respond more quickly to scarcity or surplus and to quality**. Currently this opportunity is hardly taken advantage of with regard to work, but in the longer term, for example, higher fees might be requested during seasonal peaks. Cyclical peaks (and troughs) might also cause rates to rise (fall) more quickly. This **variation in remuneration** for work helps balance supply and demand. When there are shortages on the labour market, dynamic pricing means that workers end up with the clients who need them most (they are willing to pay the most). When the fee for a specific type of work (IT) goes up, more workers will soon enter the market. This will cause prices to fall again.



Chapter 2 | Work platform threatens traditional temporary employment sector

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2.1 Work platforms good at matching and 'unburdening'

The traditional temporary employment sector has three roles: recruiting/selecting, limiting risks and 'unburdening'. Which of these roles can work platforms take over and which players are under pressure?

1. Platform better at recruitment and selection in the future

Technological progress ensures that recruitment and selection can be carried out more intelligently and better via algorithms. This is now still in its infancy. Online players such as job sites, aggregators and online employment agencies still make limited use of this and so selection is still people's work. In the future fees will also be fixed better through dynamic pricing or auctioning on a platform. This role therefore is under serious pressure.

2. Limiting risks not the core of a platform

Work platforms do not take on any of the employer's risks. If a client wants to cover its labour risks, a temporary employment contract is still a solution. This is an advantage for employment agencies. But if regulations were to make it just as easy and attractive (for a worker and instructing party) to conclude an independent contractor contract, then independent contractor platforms would be a formidable competitor. A platform can also facilitate employment contracts directly. If rules make the conclusion and dissolution of zero-hour contracts easy, these contracts could also be concluded and dissolved by digital authentication through a work platform. In other words, rules will determine to what extent this role is under pressure.

3. Platform can 'unburden' more cheaply

The temporary employment sector 'unburdens' customers by, for example, handling contracts, time tracking and payment. These tasks can often also be arranged digitally via an online platform. This means that work platforms can 'unburden' more cheaply than the traditional temporary employment sector. In complex processes or contracts, the temporary employment sector still has a head start, because automation is more difficult here. Large parties will therefore be keen to use the additional services of the industry. However, in the long term this role will also come under pressure.

Conclusion: regulations will determine the temporary employment sector's position

The temporary employment sector should see the platforms primarily as competitors with regard to recruitment and selection and secondly with regard to 'unburdening'. The temporary employment sector is better at risk limitation, but rules will determine how much benefit the industry derives from this. This depends on the demand for temporary staffing compared to independent contractor contracts. In the future, platforms could also be attractive for concluding direct employment contracts. This depends on regulations.

Work platforms threaten the traditional temporary employment sector and online models

	 Recruitment and selection (matching)	 Risk limitation	 Unburdening
Traditional temporary employment sector			
Temporary employment agencies	✓	✓	✓
Secondment agencies	✓	✓	✓
Payroll companies		✓	✓
Recruitment and selection agencies	✓		
Independent contractor agencies	✓		✓

✓ = proposition under pressure due to the arrival of work platforms
 ✓ = proposition **not** under pressure due to the arrival of work platforms

2.2 Likelihood of platformisation differs per profession

On the previous page we saw that the likelihood that platforms will compete differs per type of player. However, the likelihood also differs per profession.

The likelihood that a profession will become 'platformised' increases when

- 1 ...professions are **easier** to 'platformise'
- 2 ...the **benefits** of a work platform are greater

The **ease** of 'platformisation' mainly depends on two factors: the simplicity of the work, which determines how easy it is

to give a good rating and to make automated matches. For specialist work, matching is more complex and ratings less easily reflect the nuances of someone's qualities. But as technology develops, more will be possible. The second decisive factor is the ease with which the work can be performed remotely. If this is possible, a platform can reach a much larger market. This makes it easier to scale up and recover costs.

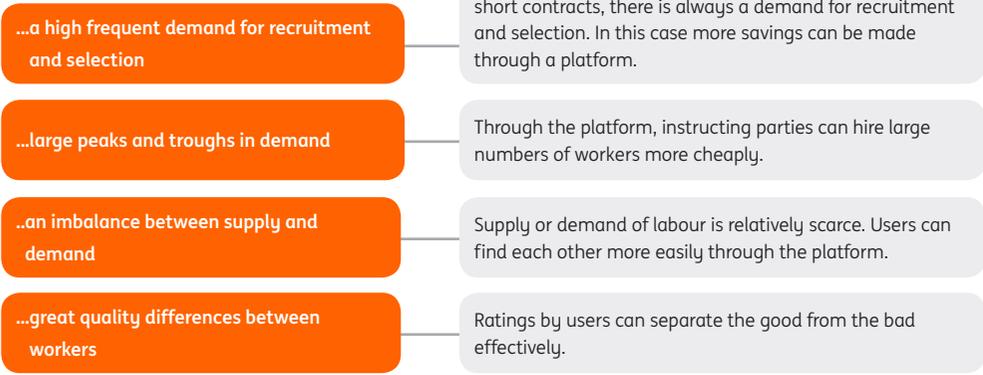
The **benefits** of a work platform are greater when the recruitment and selection and price determination are more important in a profession. This is the case when there is a high staff turnover, when there are many peaks and when there is an imbalance on the market.

A platform also offers advantages when there is a heterogeneous supply: if one designer is much better than another, for example. When a rating can make a good distinction, the platform is an attractive selection tool. This seems paradoxical: selecting work through a platform is easier if the work is very homogeneous (the taxi driver), but precisely when quality differs more and the platform makes this visible (the designer), the benefit of a platform is great.

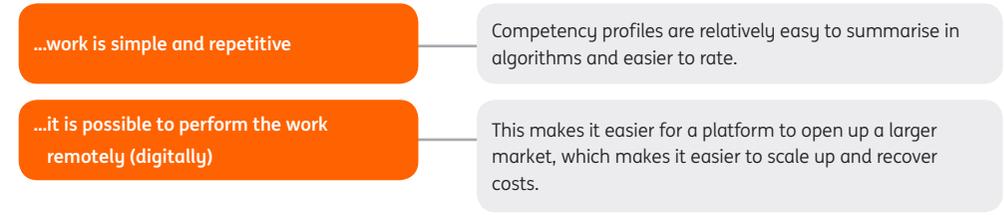
On balance, we see ten occupations on the next page where the temporary employment sector now plays a major role, but which are most sensitive to work platforms.

The likelihood of 'platformisation' differs per profession

The **benefits** of work platforms are greater for professions with the following characteristics...



A platform is **easier to achieve** if...



2.3 Examples of professions: temporary employment sector stands much to lose here

The table contains professions where the temporary employment sector, in particular temporary employment agencies, has relatively much to lose. Taxi drivers now work through, for example, Uber, but before this the temporary employment sector never played the role of intermediary for this profession. So taxi drivers do not appear in this table.

Professions	Reasons why work platform is relatively beneficial	Reasons why work platform is relatively easier
 Auxiliary staff in construction and industry	<ul style="list-style-type: none"> Demand for this group is characterised by peaks and troughs (sensitive to seasons and cycles) Imbalance between supply and demand expected to increase, due to more demand for auxiliary staff 	<ul style="list-style-type: none"> The work is repetitive
 Handymen: carpenters, plumbers, painters and metal sprayers	<ul style="list-style-type: none"> Demand is sensitive to cycles and so subject to peaks and troughs Demand is expected to rise and the imbalance between supply and demand to increase In the long term there will always be new demand for recruitment and selection for these professions 	<ul style="list-style-type: none"> Werkspot shows it is technically possible to make matches for this sort of profession through an online platform. Werkspot does not compete as a B2C platform directly with the temporary employment sector. A B2B platform for handymen, if this starts up, will compete directly.
 Cleaners	<ul style="list-style-type: none"> High staff turnover creates an almost constant demand for recruitment and selection 	<ul style="list-style-type: none"> The work is repetitive
 Waiters, bar staff and kitchen assistants	<ul style="list-style-type: none"> High staff turnover creates an almost constant demand for recruitment and selection The professions are cyclically and seasonally sensitive. As a result there are peaks and troughs in demand Quality differences between workers are great; this makes a rating more valuable 	<ul style="list-style-type: none"> Platforms Temper and Flexbook show that hospitality staff can work well through a platform
 Loaders, unloaders and shelf stackers	<ul style="list-style-type: none"> Instructing parties often fill vacancies in these professions on a temporary basis; this means that demand for recruitment and selection for these professions is constant Demand for loaders and unloaders has clear peaks, for instance in December. 	<ul style="list-style-type: none"> The work is repetitive
 Drivers (cars and vans)	<ul style="list-style-type: none"> High staff turnover creates frequent demand for recruitment and selection 	<ul style="list-style-type: none"> The work is repetitive
 Call centre staff outbound	<ul style="list-style-type: none"> High staff turnover creates a constant demand for recruitment and selection Ratings on the platform help make it possible to find the most service-oriented workers 	<ul style="list-style-type: none"> The work is repetitive
 Software and application developers	<ul style="list-style-type: none"> There are shortages (an imbalance) on the labour market The demand for these professions is cyclically sensitive and therefore has peaks and troughs 	<ul style="list-style-type: none"> The work can easily be performed remotely so the scale of the platform can be recovered easily
 Databank and network specialists	See description under 'Software and application developers'.	See description under 'Software and application developers'.
 User support ICT	<ul style="list-style-type: none"> The imbalance (shortage) on the labour market is expected to increase Clients can find the most service-oriented worker through the platform 	<ul style="list-style-type: none"> The work is repetitive to a certain extent The work can also be performed remotely

2.4 Scenarios for the speed of the disruption

How fast can the disruption take effect? We see two crucial factors that will determine the pace: legislation and the speed of technological development.

Technology: nowhere near fully developed

Today's work platforms – LinkedIn or Uber – are still far from optimal. Their ratings are not yet optimal, so a review is not sufficient basis for hiring many types of workers. Nowhere near everyone has their profile on a platform and there is nowhere that shows every job or all the work. Neither are the services on the platform that 'unburden' users, such as scheduling and invoicing, fully developed. So the first crucial factor is the speed of technological development. The faster this progresses, the sooner a solution on a platform will compete with the current temporary employment sector.

Rules: unpredictable and crucial

We expect labour market regulations to play a crucial part. Employers and employees will observe this very carefully to decide under which contract form they will organise their work. And this legislation is currently the subject of fierce debate. The first proposals regarding the Wet Arbeidsmarkt in Balans (Balance on the Labour Market Act) have been released for internet consultation. The determining factor is firstly to what extent employers see risks associated

with employment practices. The following applies here: the more complex and risky an employment contract is, the less easily it can be organised through a platform. Then the 'unburdening' role of the temporary employment sector will continue to be important. A work platform would have to spend a lot of time interpreting Dutch legislation in order to enter the market.

Secondly - and at least as important - are the possibilities and financial attractiveness for a worker to independently sell his or her own labour (independent contractor). If this is permitted and is financially attractive, then this type of contract is an important competitor to temporary employment contracts and payroll companies. In addition, work that can be done as an odd job will be arranged through a platform, because a platform can facilitate this relatively simple contract much more easily. We expect the Dutch market to be unpredictable in the coming years. Only after this has evolved will platforms continue to position themselves. But if working as an independent contractor becomes highly attractive, the chances are that work platforms will play a much larger role on the flex market. Differences between countries mainly regard regulations and much less the availability of technological developments. Regulations are therefore a decisive factor in the difference between countries with regard to the speed at which work shifts to platforms.

Market share of temporary employment sector is at stake

Contracts	Technology develops	
	slow	fast
simple and low-risk		Large part of the market shifts to platforms
complex and high-risk	Small part of the market shifts to platforms	

2.5 20-70% of the Dutch market could shift to work platforms

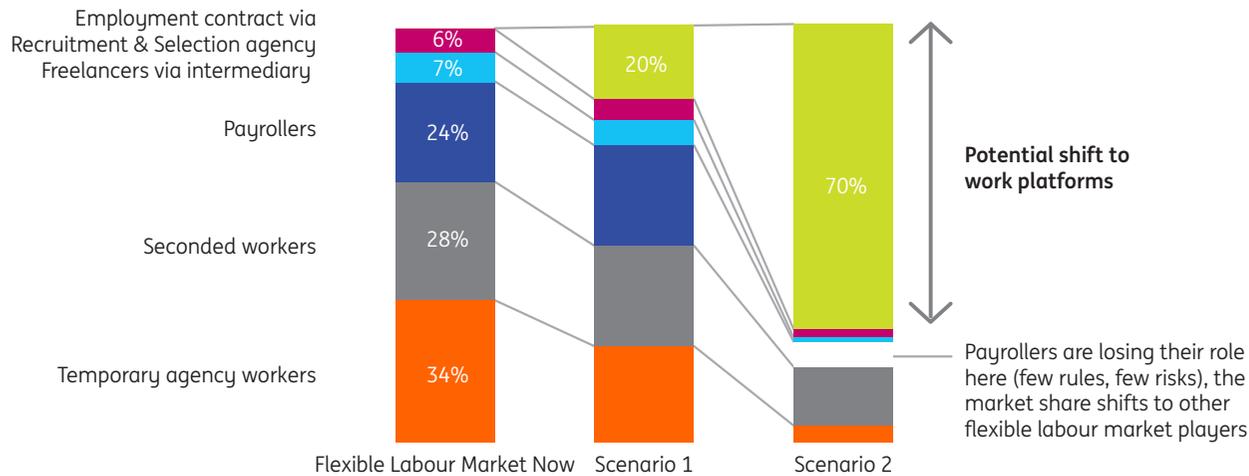
A numerical estimate of the impact of work platforms has been made for the Dutch market. Based on the role that the traditional temporary employment sector plays in mediation by type of profession, we estimate the market share¹ of the sector that can shift to work platforms within the foreseeable future (five to ten years). How much of the market is at stake depends very much on the development of technology and labour law.

20% of mediations are very suitable for platforms
The benefits of work platforms are greater for some professions (with high-frequency recruitment, many peaks and troughs in demand, imbalance in the market and great quality differences). We expect that 20% of the market can shift to work platforms if technology develops at a moderate pace and rules change little. In this case, platforms will only organise professions where the benefits are great and the activities consist of repetitive, simple or digital work. As technology develops faster, within ten years platforms will also be able to match specialist professions and better rate the quality of users.

If everything is allowed and possible, 70% could go through a work platform

If technology also makes it possible to organise specialist professions through a platform and rules drastically reduce the risks and complexity of employment and independent contractor contracts, up to 70% of the market could shift to work platforms. This is based on the assumption that the Dutch government leaves the functioning of the flex market almost entirely to the market: this is, of course, an extreme scenario. If technology and rules present no limitations at all, it is theoretically even conceivable that work platforms could facilitate the entire flex market, provided market players want to use the platform.

Shift of Dutch market to platform could increase to 70% (in number of persons)



Under current rules, payroll companies' loss is limited

If the rules remain unchanged, the competition presented by work platforms for payroll companies will be limited (Scenario 1): risk limitation and 'unburdening' are the sole motives for payroll services and not recruitment and selection (the focus of work platforms). If the rules remain unchanged, these motives will continue to exist. But if rules make employment or independent contractor contracts less risky and complex, payroll contracts will lose their attractiveness. In the most extreme case (risk-free contracts that can be concluded quickly and can be dissolved), payroll companies will lose their raison d'être (Scenario 2). This can also happen if regulations impose more stringent requirements on payroll services - we have not included this variant here.

1 Based on the Dutch market (in number of people) in which the flex sector mediates - so we do not look at the rest of the labour market, where platforms can also play a role.

Source: CBS, ABU, Intelligence Group ZEA 2017, processing by ING Economisch Bureau

2.6 Who builds the platform? Tech platform versus temping agency

Work platforms could take over a large part of the current market of the temporary employment sector. But who builds and owns the platform? Are these the current tech companies like LinkedIn/Microsoft, Uber, Google or Temper? After all, the current temporary employment sector is not passive, is it? Three factors are decisive: technology, regulations and an extensive network of employees and employers.

Technology crucial in position of tech companies

Technology improves a work platform in two ways: first of all, it improves the **matching** algorithms that are needed for recruitment and selection. It also makes new **'features'** possible that help to better 'unburden' users. A work platform that can make the best match automatically and is easy to use will attract more and more new users and thus grow more quickly. This puts the current technology platforms at an advantage.

Network: starting position differs

A larger network increases the chance that users will find a suitable **match** through the platform. A platform that has a lot of users now will attract more users in the future. Balanced growth is important: there must be a balance between the number of workers and the number of instructing parties. This is called the 'network effect' and gives the platform market a 'winner takes all' character. Platform giants like Google and Facebook have **global** networks, while the networks of the temporary employment sector are significantly smaller. But they are more selective:

workers and instructing parties. Especially the contact with the **large companies** is crucial: after all, they have a lot of work and jobs to offer. And if market participants think of the temporary employment sector rather than platform giants - for example Randstad and not Google - when looking for work or workers (or vice versa), this works to the advantage of the temporary employment sector (platform giants). **Brand value** is therefore important.

Temporary employment sector can limit employer risks better

The temporary employment sector is the best at limiting employer risks and complying with employment regulations. If the government were to drastically reduce these rules, standardise employment contracts and make them less risky, the temporary employment sector's role with regard

to 'risk limitation' and 'unburdening' will disappear. Platform giants will then more easily be able to scale up their work platform, because less knowledge of regulations is needed. The demand for temporary employment contracts will also fall if regulations make it more attractive to hire **independent contractors**. But on the other hand, if the risks accompanying independent contractor contracts are great, a temporary employment contract will offer a solution. An illustration of this is that in the Netherlands large companies exchanged independent contractors en masse for agency workers in response to the uncertainty about the Dutch Assessment of Employment Relationships (Deregulation) Act (DBA Act). It turned out the frameworks created by this law, intended to prevent bogus self-employment among independent contractors, were too ambiguous. It will therefore not be enforced until 2020; future regulations are still uncertain.

The battle for the work platform market is not over yet

Worker	Temporary employment sector	Technology platforms
Technology	<ul style="list-style-type: none"> Major players like Randstad, Adecco and Manpower purchase 'matching' technology, or develop this themselves Occupied for some time now with the digitisation of 'unburdening' services 	<ul style="list-style-type: none"> Ahead in developing technology making automated matching possible Experts in developing innovative features Sought-after employers by tech talent
Network	<ul style="list-style-type: none"> Network is smaller, but members are only workers and clients (more relevant) Personal approach, customer relations central. This could create more loyal clients and a stronger network 	<ul style="list-style-type: none"> Global, large network Strong brands: Google is the top-of-the-mind search engine, LinkedIn and Facebook are the best-known social networks
Knowledge of complex employment rules	<ul style="list-style-type: none"> Knowledge of regulations More experience with 'unburdening' 	<ul style="list-style-type: none"> Benefit if working as an independent person is attractive Benefit if employment contracts are straightforward and risk-free

■ Shows who is the strongest in the subsector

2.7 How do we arrive at this estimate for the Netherlands?

Brief outline of the approach

In order to estimate the share of the Dutch temporary employment sector that is at stake due to work platforms, we look at which characteristics apply to each profession. Professions have a great likelihood of 'platformisation' in Scenario 1 if at least four of the benefits to the side apply. A profession must score at least one on the characteristics that make 'platformisation' easier (simple and repetitive or digital work). Even if a work platform already exists for this specific profession, we argue that 'platformisation' is relatively easy.

Based on statistics from Statistics Netherlands and ABU regarding the number of people (within a profession) working

through the temporary employment sector, we estimate in which segment of the market the traditional temporary employment sector might lose out to work platforms (job, temporary work, or recruitment and selection platforms). When doing so, we disregard who owns the platforms (traditional temporary employment sector or platform companies). Scenarios 1 and 2 differ in the extent of technological development and regulations. The analysis is meant to illustrate the order of magnitude of the shift. How work platforms will actually develop is uncertain and depends on many factors.

Scenarios

Scenario 1: work platform grows MORE SLOWLY

- Speed of technological progress is moderate: in 5-10 years, work platforms will only be able to organise professions involving repetitive and digital work, and professions that already have a work platform
- Rules regarding employment contracts and the hiring of independent contractors hardly change

Scenario 2: work platform grows MORE QUICKLY

- Technology develops rapidly: in 5-10 years, platforms will also be able to organise specialised professions
- Rules drastically reduce the risks of being an employer and employment contracts are highly flexible. Rules for hiring independent contractors are also flexible
- Little time and knowledge are required to conclude employment contracts
- Only professions with one of the following characteristics are still unsuited for 'platformisation': when there are high welfare risks (military and medical professions), high information and decision-making risks for the organisation (e.g. directors and managers) or if a 'fit' with the organisational culture is crucial (e.g. directors)

In both scenarios we keep the total market for the temporary employment sector constant and make no allowance for the existence of work platforms influencing demand. Neither do we make allowance for trends abroad.

Scoring the likelihood of 'platformisation' by profession

Platform creates more benefit if there...

...is constant demand for recruitment and selection

...there are large peaks and troughs in demand

...is an imbalance between supply and demand

...are great quality differences between workers²

Professions score positive if...

...job turnover is high or temporary job contracts are frequently used

...demand for the profession is cyclical or seasonal

...shortage or a surplus is expected on the labour market¹

...work is strongly service-oriented and direct contact is key (hospitality staff, sales staff)

Easier to 'platformise' if...

...work is simple and repetitive

...it is possible to perform the work remotely (digitally)

Professions score positive if...

...work is classified as level 1 (elementary work) in the ISCO occupational classification

...the physical proximity of the instructing party is not or rarely required and work can be performed digitally.



1 On the basis of ITKB indicator of ROA. www.werk.nl/xpsimage/wdo214889
 2 Here we limit ourselves to service-oriented work, because rating systems can be relatively simple and accurate for this type of work. Quality differences are also great in creative and analytical professions, but quality is harder to rate. In Scenario 1 we assume that ratings for these professions will not yet be of sufficient quality in the near future.



Chapter 3 | The temporary employment sector can remain competitive in niche markets

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3.1 'Human factor' in the temporary employment sector still valued

The 'human factor' is still needed even in the digital era. The temporary employment sector can continue to distinguish itself by focusing on activities where work still has to be done by people. We see five sectors where the temporary employment sector with a 'human factor' can retain a head start over automated work platforms.

Recruitment and selection of specialists

Recruitment and selection in specialist segments are currently not or only partly automated, due to the more complex competency profiles. For example, Hired.com, which focuses on IT specialists, works explicitly with algorithms and 'Talent Advocates' to make appropriate matches. Work platforms now focus mainly on simple and repetitive work, because the competence profiles are relatively easy to automate.

Guidance of reintegration processes and people with a disadvantage on the labour market

Matching algorithms on work platforms seek the best suitable match between work and workers, based on objective factors such as previous work experience and competences. From a social point of view you do not always want 'the best to win'. For instance because then people with a disadvantage on the labour market would have even more difficulty finding work. This group needs a personal approach when seeking work.

The same applies for reintegration processes where personal guidance is essential. For both segments, the main focus of the service is on (assisting with) good employment practices and 'unburdening' (offline guidance, feedback)

Finding candidates with the right 'fit'

The automated testing of someone's 'culture fit' or personal motivations is more complex than testing whether someone's competency profile matches an assignment.

Recognising and encouraging talent

Workers with a large development potential but still few competencies (e.g. recent graduates) often also seek a form of guidance. The traditional temporary employment sector knows its clients and has a track record in recognising and encouraging talent.

Contributing to 'competency flexibility'

Technological innovations mean that new competencies are always needed to perform work¹. It is a challenge for HR managers to predict which competencies will be needed and when, because technological innovations are unpredictable. The temporary employment sector can add value by recognising new competency needs faster than the market and having people with the right profiles ready when they are needed. In doing so the flex sector contributes to clients'

'competency flexibility': having quick access to the right people. Because self-learning algorithms now mainly learn from the past and do not look to future trends, the temporary employment sector adds value here.

Personal approach and being there

The temporary employment sector expects that SMEs in particular will continue to need a physical point of contact². This means that the temporary employment sector with its current physical network and customer relations has an advantage over platforms. A physical point of contact also remains valuable for assignments where a large volume of labour and coordination is required. For example, coordination is essential for larger events; the temporary employment sector can distinguish itself from a work platform by 'unburdening' customers as much as possible.

1 HR managers expect that due to technological development, on average, within 5 years, one third of new competences will be needed to perform a job (ING Economisch Bureau, 2016; Mens en Machine in de Flexbranche) Publication in Dutch.

2 <https://fd.nl/ondernemen/1228162/randstad-digitaliseert-maar-uitzenden-blijft-mensenwerk>

3.2 Temporary employment sector will join in debate on regulations

Rules determine both the speed of platformisation and the competitive strength of the flex sector compared to work platforms. The emergence of job platforms in particular facilitates the hiring of independent contractors as opposed to temporary employment contracts and employment contracts. A more level playing field between independent contractors and workers contributes to the competitiveness of the temporary employment sector.

Job platforms compete with the temporary employment sector

Before the emergence of job platforms, the temporary employment sector was the only channel for companies to hire flexible labour. The agency provided the labour, but formally continued to be the employer. The arrival of the job platforms makes it easier to hire independent contractors without there being any question of an employment relationship. How job platforms will develop in the future depends on regulations: clear, simple and generous rules with regard to the hiring of independent contractors make further growth more likely. In this case the role of the temporary employment sector as intermediary and employer will diminish.

Social debate on the influence of platforms

The desirability of job platforms is a subject of public debate. There are three possible objections. First, the algorithms of platforms may discriminate, although it is not certain whether in practice this would be more than when workers are hired directly through the temporary employment sector. Secondly, platforms will increase the remuneration of 'scarce talent'. Remuneration in professions where supply is high, like taxis, might, on the other hand, decrease. Finally, job platforms can encourage 'bogus self-employment': instructing parties circumvent the risks of being an employer, while there is in fact a disguised employment relationship. Already in May 2017, the *Financiële Dagblad* wrote that job platforms are eroding the position of employees ('Met zpp'er als koerier holt Deliveroo de arbeidsmarkt uit' FD, 3 May 2017).

Government working on regulations

As stated earlier, the Dutch government is working on the Labour Market in Balance Act. This will affect the attractiveness of different employment contracts and the cost of flex work. The law will also affect the complexity of employment contracts. Complex contracts are more difficult to conclude through a platform.

Legislation for independent contractors is also being worked on: the Dutch Assessment of Employment Relationships (Deregulation) Act of May 2016 will not be enforced and

the Cabinet intends to set a minimum rate for independent contractors that will be between €15-18. However, it has already been argued, for example by the trade unions, that this approach will not work in practice. In addition to these rules, the cost structure of the self-employed versus that of employees also plays a role: the extra tax credit and no compulsory insurance for sickness and pension make self-employed people potentially cheaper.

Temporary employment sector taking active part in debate

Through, for example, the ABU, the industry is actively participating in the debate on the future of the labour market, such as in a whitepaper about platforms or on the Labour Market in Balance Act. The industry argues, for example, against bogus self-employment and in favour of equal social security, regardless of the contract form (in other words: also for the self-employed).

Rules are important in many industries, and this is especially true in the temporary employment sector: the size and 'distribution' of the market depend on this. The fact that platforms, which thrive on simple and liberal regulations, are a potential new competitor strengthens the impact of rules on this industry even more than in the past. However, the industry will also have to take into account the fact that its own members are also considering providing platform solutions.

3.3 Temporary employment sector needs to digitise and 'platformise' further

To remain competitive in the future, the traditional temporary employment sector has to digitise processes wherever possible. First of all to keep costs down, but also to tap into new income flows alongside the traditional flows. The temporary employment sector can also increase its competitive strength by investing in work platforms itself.

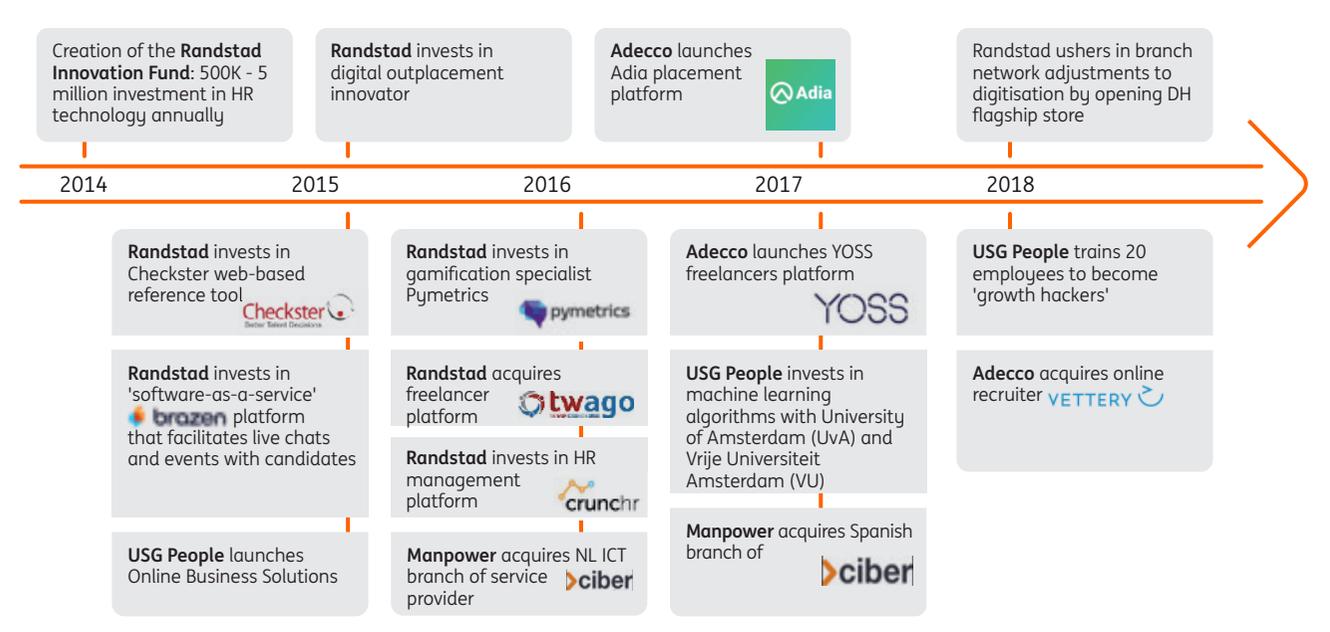
'Unburdening' is being increasingly digitised...

Work platforms already offer online services like scheduling, time tracking, invoicing and factoring. Now, especially when serving large companies, there is still a clear role for the temporary employment sector to coordinate and streamline processes and systems.

...but the digital 'unburdening' of large customers is still a challenge

At large companies multiple people and systems are often involved in the hiring of workers. A step that still has to be made is to connect all the stakeholders and processes to the platform. The rating system for large customers also requires a different approach. The HR professional who, for example, provides invoicing services through the platform is not necessarily the best person to rate labour. The platform must also make it easier to rate many workers at the same time, without losing out on quality.

Market leaders in the flexible labour market see the need for digitisation and platform creation



Development of matching algorithms continues

Matching algorithms are becoming smarter. As a result, recruitment and selection can be done through platforms more often. In the future, we expect algorithms will not only to be able to match more specialised work, but also to be able to factor in components such as 'culture fit' and motives. So to remain competitive, the temporary employment sector will have to platformise.

Agency platform reduces costs and risks

The traditional temporary employment sector is best positioned to launch an agency platform because of its knowledge and experience in limiting risks and 'unburdening'. As long as there is a demand for temporary workers, there is an opportunity here for the temporary employment sector.

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