

Using AI to Decommoditize Soft-Skilled Workers



Blue-collar work is [almost entirely](#) platform intermediated. Thousands of employee scheduling systems and gig work apps determine who works when, for what pay. Each platform is a **task-based vertical**; [Doordash](#) for deliveries, [Qwickgo](#) for hospitality bookings, [Me@Walmart](#) for shifts at the local Supercenter, Rover for petcare work, [and so on](#). Selling across multiple platforms is self-defeating¹. So, workers are **stuck in siloes**. They have [no data](#) to inform their selection of work types or platforms.

Soft-skilled breadwinners have [decreasing](#) chances of a steady job. Instead, they are in [nonstandard employment; deployed](#) by tech., as needed, in any silo. Official data [barely capture](#) this trend, confirmed by [countless reports](#). But even pre-Covid, [36%](#) of US adults relied on ad-hoc work. Containing labor costs is key for platforms; AI is increasingly something **being done to** this, [disempowered](#), workforce.

Blue-collar portfolio employment **can** be enriching. Most people have a multi-faceted range of capabilities and life experiences, each of which they *could* monetize. The key is **horizontal markets for hour-by-hour labor** in any region. They can connect each person to all types of work for which they are eligible, hour-by-hour, across hundreds of sectors.

Each person will be eligible for multiple sectors, choosing their path with real-time, ultra-granular and localized, **like-for-like** data. AI tools can use that to upskill, trigger support, regularize hours, align supply with demand, plot steppingstones to a goal, foster job creation, and more.

Public agencies [in the UK](#), and [now US](#), have launched pilots showing how their **unique leverage** can [instigate](#) horizontal hour-by-hour labor markets. [Our](#) technology development and learning from these initiatives shows the way currently siloed, interchangeable, cheapened, [angry](#), workers can each become a differentiated asset to be unleashed in their local economy; working at times they choose for a mix of organizations, *on their own terms*, with pathways upward.

[Moravec's paradox](#) tells us humanity will remain better at soft-skilled tasks than robots. In reality, that is now nonstandard work. Keeping humans competitive while rewarded for adaptability, reliability and each person's unique capabilities could be an economic and societal priority. It requires workforce funders and agencies to think beyond jobs and **also empower hour-by-hour labor markets**.

¹ If you are unavailable to System A while doing a task sent by System B, A's algorithms will likely downgrade you, curtailing your future work. And vice versa.

[A.I.] can drive a long-needed transformation by bringing greater speed, flexibility, and intelligence to bear on the problem of optimizing schedules, so companies can deploy the people they need when they need them and unlock new levels of efficiency.

McKinsey Insights:
Nov. 1, 2022

[A] growing global workforce who labour in the service of algorithms. There are now more than a billion workers in their ranks in one form or another.

Financial Times:
Mar. 14, 2024

Unbalanced labor market power is what makes technology—including AI—threatening to workers

Economic Policy Institute:
Mar. 28, 2025

[I]t would be futile to try to stamp out gig work in the hope that permanent jobs will take its place. The real alternative to gig work is often no work at all.

Economist: Sept. 18, 2025

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Soft-skilled Work and AI, a Summary of Research Findings

Nonstandard work is an underreported, destabilizing, norm for millions:

**Government
has no idea
how many gig
workers there
are**

MarketWatch:
Jan. 7, 2019

We find that 80% of workers have little to no input into their schedules and that 69% are required by their employer to keep their schedules "open and available" to work whenever needed. This precarious scheduling occurs against a backdrop of insufficient work hours.

Harvard Kennedy School:
Oct. 16, 2019

**Low-Wage
Workers
Rarely Get to
Control Their
Time**

Urban Institute: Aug. 27, 2025

AI will be exploited by platforms *already* predicated on disempowered labor:

Scheduling is now a powerful tool to bolster profits, allowing businesses to cut labor costs with a few keystrokes. "It's like magic," said Charles DeWitt, vice president for business development at Kronos, which supplies the software for Starbucks and many other chains.

New York Times:
Aug. 13, 2014

**Gig Workers Are More
Undervalued Than
Ever Before. Tech
Companies Are
Spending Like Crazy to
Keep It That Way.**

Mother Jones: May/Jun. 2020

Stop letting rigid labor models create backlogs and waste. Align every labor hour to the work at hand with demand-driven scheduling

**Software company
marketing:** 2026

Public agencies know they need to support rapidly evolving labor markets:

Our results suggest that the success of populist parties hinges on the government's failure to protect the losers of structural economic change.

Journal of Political Science:
May 15, 2024

**Soft Skills Matter
Now More Than
Ever, According
to New Research**

Harvard Business Review:
Aug. 26, 2025

**Governments
must start to
lay a safety-net
for workers
threatened by
AI**

Economist:
May 14, 2026

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Detailed appendices to this briefing are at:

<https://www.beyondjobs.org/ai>



Horizontal markets for hour-by-hour labor can embody tools and data inconceivable in vertical platforms

1) Nonstandard Workers and Platforms

Many people need work *but not a job*. As economies digitized, thousands of labor platforms emerged, each shaped by priorities of its owner. [Cutting labor costs](#), delivering [just-in-time workforces](#) and [extractive](#) charges are typical aims in these [opaque](#) systems. As AI [accelerates](#) fragmentation of employment, impacts of one-sided labor platforms are becoming unavoidable.

a) Nonstandard Workers: Complex Lives

Millions of breadwinners seek employment *but not a scheduled-hours job*. Work must fit around day-to-day uncertainties in a medical condition, family caregiving, complex parenting needs, studying or a fluctuating work schedule, starting a business, or other unpredictable partial employment a person wants to retain. Increasingly, jobs are nonexistent or - in reality - just [on-call work](#) for one organization.

Many who *could* take regular hours don't want them. [Research for UK authorities](#) found 68% of Soft-skilled labor market entrants would rather build diverse experience, skills and networks through a personal portfolio of multi-source employment than rely on a single organization.

Reporting in, for example, the [New York Times](#), [Axios](#), the [Washington Post](#), and the [Los Angeles Times](#) has revealed how official data like that from the US Bureau of Labor Statistics lack the granularity to capture activity outside traditional employment. But a figure of 36% of US adults reliant on nonstandard employment was arrived at independently by both [Gallup](#) and [McKinsey](#); 7 years ago.

It may be time to think of any region's labor market in two broad pools:

- **Job-seekers**: Individuals blessed with regular availability for employment, who want a job and should be able to find one.
- **People with Complex Lives**: For these diverse individuals, work must fit around changeable commitments, possibly including work from other sources. They are in Nonstandard employment.

Architects, lawyers, consultants and other knowledge workers needing personalized work hours are able to pull projects - often from international clients - off sites like guru.com then complete them where and when they choose. These globally focused home freelancers are not our concern. Blue-collar seekers of "gig work" must be at a given place at a specified time for each assignment. They interact constantly with their local economy. State and city services for workforce and education can be pivotal, it is in any regional government's interests to support them alongside job-seekers.

b) Current Connective Tissue for Nonstandard Employment

Today, Soft-skilled seekers of fluid work connect to the labor market in three broad ways, all bad:

- **Gig platforms**: Uber is the most scrutinized. They have been found [misleading](#) work-seekers, [slashing](#) pay, [distorting](#) the market against workers, [withholding](#) data, and systematically [undermining](#) regulation. This helped Uber become the [highest valued](#) private company ever. It has [countless](#) imitators across thousands of types of labor. Cutting payrates is routine for these [secretive](#) businesses. See for instance reporting on on [Shipt](#), [Lyft](#), [Uber](#), [Doordash](#), [Instacart](#), [AmazonFlex](#) or [TaskRabbit](#). [Most gig work platforms ultimately collapse](#).

- **Scheduling systems:** Corporates can deploy employees, [hour-by-hour](#) in line with need by switching staff into a monopsony labor market in which they buy employees' hours. The best-selling product is [WC8](#), advertised to finance directors with slogans like "*Manage your Workforce Without Limits*". Smaller companies act similarly to keep labor costs competitive. Even in 2017, [41% of US hourly employees](#) did not know next week's hours or pay.
- **Off-the-books work:** In 2011, Urban Institute researchers said [up to 40%](#) of American workers were active in the shadow economy (page 4). Some economists put the US shadow economy at [10%](#) the size of GDP. It is mostly made up of odd hours of work.

There have been many attempts to curb excesses of "gig" platforms with legislation, litigation, organizing, upskilling and cross-platform tools. They have barely impacted. [Here's why](#).

c) Consequences of Siloed Labor Markets

The [human costs](#) of this new reality for working class households surface poignantly in coverage of too-common incidents like the 2014 [death of Maria Fernandes](#), 32, in her Dunkin' Donuts uniform. In her daily battle to get enough work hours from her labor market silo, the single mother had been scheduled to finish late night at one outlet, then to open another branch for the breakfast trade at dawn. Snatching sleep in her car, a heater to ward off the cold ignited a fuel can, killing her.

[Rising household insecurity](#) is an externality for companies racing to outcompete other labor market platforms, each knowing if they attract enough buyers of labor, workers will have to follow. The costs of blindly cycling through platform after platform in search of income are borne entirely by work-seekers. But there are quantitative consequences borne by public agencies. They include:

- **Labor shortages:** Lack of workers in sectors including building, healthcare, and childcare are holding back growth and regional competitiveness. With hard working people like Maria Fernandes hidden in siloed platforms that [secrete data](#), labor market inefficiencies multiply.
- **Poor workforce quality:** Commoditized, cheapened, controllable workers may boost a bottom line but demotivated, disengaged employees [create societal costs](#).
- **Tax revenue lost:** With so little control for platform-intermediated workers in the legitimate economy, many breadwinners turn to informal work [in the shadows](#). Quality fluid work can help people with complex lives stay off welfare and provide a [path off assistance](#) for individuals.
- **Electoral rage:** As household security collapses, voters [seethe](#) and [radicalize](#). Researchers have shown precarious work as key to working class support for [Trump in the US](#), [Farage in the UK](#), and disrupters in [many other nations](#). Centrists are [seeking solutions](#).
- **Limitations of AI:** There will be many attempts to use AI to defeat platforms' cost-cutting AI with data brokerage, app comparisons and so on. They will [likely be thwarted](#) as were [previous generations](#) of worker empowerment technologies. Some will apply AI to issues like portable benefits, skills passports and other attempts to bring Nonstandard employment closer to traditional labor markets. But building on [unstable](#), [one-sided](#), platforms remains a partial fix at best.

2) Horizontal Nonstandard Labor Markets

Very few people have only one ability from which they can earn. They need markets that open all their possibilities. Over years of operations with many stakeholders, we developed a sophisticated platform: *GoodFlexi*. Built around protections, control and progression for hourly work-seekers, it is horizontal (all types of work) and highly granular in its management of each person's availability, badging and construction of pay/charges. AI can turbocharge this platform with individualized interventions, nuanced scheduling and personalized steppingstones.

a) Very Different Platforms

Many [interventions to support ad-hoc workers](#) are feasible. But systematic, scalable, sustainable, change is only viable with a sophisticated technology platform. The transactions are too fiddly, the protections, worker aspirations, and stakeholder needs too divergent, for simple websites or apps.

Any worker seeking personalized hours can create very rich data because their touchpoints with the market are so frequent and deep. Jobseekers typically enter their labor market every few years when it's time to move on. Job sites just broker a connection between candidates and recruiters who negotiate conditions, final salary, and other details off-platform. But a Nonstandard worker can be in and out of the labor market several times a day. Assignments are typically end-to-end; think of how Uber tells a driver where she is going, when, and for how much. Cross-sector open data can decommoditize each person.

A horizontal market (all types of work seamlessly within one platform) can capture like-for-like data allowing - as example - someone able to work in hospitality, retail, janitorial or care to see patterns of demand/supply/pay hour-by-hour across whatever geographic area they are willing to travel for work. Such markets also make inputting of detailed availability uniquely worthwhile, unlocking yet more data.

We set [20 specific criteria](#) for our platform which will (a) allow anyone to work hours of their choosing, on their terms, seamlessly across as many types of work as they wish, with actionable data and tools for progressing towards enhanced earnings, stability, a particular career, or any other personal goal (b) enforce protections like W-2 status, all aspects of legal compliance and portable benefits (c) sharply reduce employment overheads to attract activity from for-profit platforms and the shadows (d) make a range of interventions to support struggling work-seekers uniquely cheap.

GoodFlexi incentivizes an eco-system of employers, educators, community organizations, public agencies and other stakeholders. Under local control in each region, it is [profoundly different](#) from commercial gig platforms. We offer early stage [short videos](#) showing it in action. Log-ins can be provided and we suggest following [the steps in this guide](#) which takes a tour of the basic structures.

b) Implementation Projects

Attracting a critical mass of early activity is key to *any* market platform. Apps like Uber rely on [huge price subsidies](#). We can't do this. And *GoodFlexi* is a three-way market: it needs workers, clients (buyers of labor), and possible intermediaries (acting as employer-of-record for example) in each region. It is only useful at scale which we define as a minimum \$20m of wages going through the platform in a first year of any launch. We use big labor market players to get to scale cheaply.

We have learned that any launch will be massively over-subscribed on the supply side. Workforce agencies and their networks maintain extensive email lists and promotional budgets. Once a launch is announced, many hundreds of residents seeking alternatives to gig work apps or word-of-mouth arrangements sign up immediately. The challenge is finding early adopters on the demand side. Corporate users of flexible labor are wedded to [brutal efficiencies](#) delivered by their one-sided scheduling systems. Why should they switch to a platform empowering and progressing workers?

Our manual, compiled with 40 large US public workforce agencies and with a foreword by the Mayor of Los Angeles - [How to make a Market for Irregular Employment](#) - explains how to tackle this:

- **Public sector demand is key:** Public agencies are - in aggregate - the [biggest buyer](#) of flexible or community labor in their region. By buying residents' time, across a range of skills, through a regional platform for all types of hour-by-hour labor they can start a flywheel of activity.
- **Mid-size companies come next:** Local businesses in care, retail, hospitality, building and care that aren't big enough to benefit from systems like WC8 can be attracted into the market.

We offer workforce partners our [project manuals](#) with lists of stakeholders relevant in a launch. A regional project typically starts with roundtables that identify bodies likely to support a launch.

c) The Path to Horizontal Markets

Companies like Doordash have no need, remit, or unique leverage to initiate empowering all-sectors regional labor markets. For these factors we need to turn to the world's [public employment agencies](#).

There is nothing radical about public agencies starting their own labor markets to sit alongside for-profit services. America's [2,300 Job Centers](#) compete with staffing firms but provide services focused on local growth. Each state workforce agency in the US funds [an all-sectors job matching platform](#) as an alternative to commercial job-boards like [indeed](#) and [Monster](#). Other countries provide similar platforms at national level; Canada's [Job Bank](#), [Workforce Australia](#), and [Find a job](#) in the UK, are examples.

Our [nonprofit](#) came out of the UK government's [worldwide lead](#) in extending public labor market infrastructure to Nonstandard workers. With core funding from the National Health Service, over [20 local governments](#) co-funded their own launch. [So did Tesco](#), the UK's biggest private employer. Audited [outcomes were impressive](#). In fall 2024 we [completed](#) a first year US proof-of-concept, now expanding.

Elected officials and workforce directors increasingly realize they need to extend services beyond jobs. Periodic urgency comes from issues such as punishing new [work requirements](#) for public assistance recipients in the US, or a [crisis](#) of economic inactivity in the UK. But leaders are restrained by outdated rules like a federal WIOA [funding formula](#) in the US that rewards only a region's **job** placements.

Despite these barriers, we continue working with regions wanting to unlock their Nonstandard workforce. Many struggle to find funding and are understandably wary of taking a lead rather than waiting for other areas to take on the additional work, decisions, risks and costs of being an at-scale

pioneer. We believe initial projects showing how AI could so positively impact Nonstandard workers can help resolve this impasse.

3) AI in Horizontal Nonstandard Labor Markets

Today's labor market data is largely historic and coarse-grained; derived from annual tax filings, last month's payroll records or job adverts. A horizontal market for hour-by-hour work can produce a hose of real-time and future, uniquely granular, data comparable to reporting from financial markets. The insights it can offer may seem low-key, but they transform prospects for lower-paid households. Discovering babysitters earned \$2.63 an hour more than classroom assistants within 5 miles of your home on Fridays last month can be infinitely more actionable than seeing Apple's latest stock price.

By building a picture of each person's potential, preferences, aspirations, constraints and "soft" experience to be parsed against reported and inferred market activity data, AI can propose steppingstones towards a career goal, lateral moves to increase earnings, groupings of workers who might wish to work jointly, assign budgets for "*Peer Navigators*" and other support, and so on. It can be equally useful for businesses reliant on labor or policymakers seeking economic growth and inclusion.

Overall, AI in horizontal markets can **keep humans competitive**, acknowledging many tasks classed as "lower skill" for workers remain [baffling or uneconomic](#) for robots. Strong horizontal markets foster alignment, human potential and business cases for using people rather than machines even as traditional knowledge work disappears. This section summarizes our [detailed appendices](#).

a) Transactions data

A horizontal labor market makes it worthwhile for a person to input their actual hours of availability for work; today, tomorrow or weeks ahead. The system can thus be thought of as a "*warehouse of hours*" for any region's economy. It knows who is available, when, to do what, within what parameters, based on what existing work relationships, within what personal or legally stipulated constraints.

Vertical markets for Soft-skilled labor are typically end-to-end; the platform takes in a buyer's need then allocates a worker and decides what she will be paid for the task. A horizontal market offers more nuance, assuming for many worktypes that some of a pool of workers available and eligible to meet a buyer's requirement will be more valuable to that buyer. For example, there may be 100 qualified truckers who would like a given shift today, but only 5 have experience of this buyer's yard procedures.

Thus, capture of supply and demand data is extraordinarily precise. And it extends into the future ("*There are 80 janitors qualified, willing and available to work in our facility the Saturday after next but 25 of them have already been booked by other buyers of labor*"). Labor markets have never had data like this across sector after sector. Understanding this baseline informs AI planning. → Appendix A.

b) Competencies data

Aside from each person's hours of availability for work (which can be a recurring pattern, ad-hoc day-by-day or a personalized hybrid of the two), a horizontal market uniquely merits input - and

validation - of the range of each person's abilities. We refer to these datapoints as "badges", [explained in detail here](#).

A badge can be set up by any authorized body in the markets system. Example badges might include *"Certified Hoist Operator"*, *"Trained to Administer Narcan"*, *"Cleared to Handle Financial Records"*, *"Willing to Wear a Uniform"*, and so on. Each badge can be the path to multiple worktypes (roles).

AI can digest overall and personal market data to calculate the value of any given badge (market-wide or for one person), the ROI of getting a badge if it involves payment for certification, sequences of badges a person might best use to reach a goal, and so on. It can do the same for roles. → Appendix B.

c) User data

Data about any worker captures a mix of their market entry information and inferred metrics such as Utilization, the percentage of her hours of availability for work that were booked in any time frame, geographic sub-region, or role (type of work). *"If I restricted my roles to just building site work and shrunk my travel area to 10 miles from home, what utilization could I expect next month?"*

Buyers of labor too benefit from breakdown of their needs and market alignment. → Appendix C.

d) Sector data

Analysis of data from, as one example, the market for beauticians within a horizontal system of hundreds of sectors reveals new metrics including Adjacency (the "feeder" roles from which new beauticians are emerging), Dilution (the proportion of beauticians' earnings that are coming from their other worktypes), Latency (workers who qualify to sell in this sector, currently aren't but could possibly be attracted with better pay, conditions or prospects), Time Elasticity (the extent to which demand for beauticians shifts to accommodate patterns of supply locally), and so on. → Appendix D.

e) External data

AI can forecast demand, supply and likely pay movements by ingesting local business journals, weather forecasts, event listings, transport timetables, trends in comparable regions, and multiple other sources. At its most simplistic it could, for instance, deduce *"It is set to rain next Monday so no scaffolders will be required and tourism related demand will fall, but Black Friday is coming and analysis from other regions points to an uplift in training for new distribution workers while the market is slack"*. → Appendix E.

f) AI rewards

Regional economic growth through development of human capital is the overarching measure of success. Sub-targets include increasing employability (skills gain), income (wage gain), utilization and alignment between the local economies' needs and capabilities of its workforce. Progression to self-sufficiency (possibly tapping facilities like Guaranteed Work to help as many people off assistance as possible) and comparison to similar regions, would likely be elected officials' priorities. → Appendix F.

g) Data processing

AI's key framework to support any worker in horizontal markets is their Total Addressable Market (TAM); given a person's capabilities and travel area what is the scope of the entire range of opportunities with which she could theoretically align? Given her current preferences, rules and times of availability which parts of the TAM are being missed? How could that TAM be expanded with any one additional badge? How would the TAM look if she based herself elsewhere, even just for a week?

For buyers of labor, the counterpart concept is their Total Supply Pool (TSP). How many workers in the market could, in theoretical circumstances such as offering \$100 per hour pay, be attracted into the types of work at the locations needed by this buyer? AI can test scenarios for lowering utilization (so there is headroom in the labor pool), identify subsets of workers who could profitably be offered new certification based on their adjacency and proven reliability, and more. → Appendix G.

h) AI products

"I know you don't like travelling more than 8 miles for work, but a hotel 25 minutes away on the 36 bus route can't get enough kitchen porters at times you like to work. They pay \$2.28 over your average pay last week. You would be working with people you have met on other bookings in the past. Can I extend your travel area for a trial week just to include that building?"

This is a very basic example of how a worker's weekly check-in with a chatbot might make suggestions, probe aptitude for new possibilities, trial options and learn the person's inevitably complex - possibly subconscious - blend of constraints, hopes and responsiveness as their local labor market evolves.

AI can likewise be crunching data to create dashboards reporting on trends in the local hour-by-hour labor market perhaps reflecting goals set by elected officials. It can surface people struggling in the labor market and possibly be permitted to spend a budget for initial, low-cost, supportive interventions. Once it understands any business's focus and capacity it can proactively seek opportunity. → Appendix H.

i) Ethics/Risks

Our focus is issues specific to hour-by-hour labor markets with an AI layer. Inadvertent release of user activity data becomes a key danger when workers are commoditized. Reporting can enforce rules that anonymize any filtering ("Do not display a dataset if one buyer or worker accounts for >20% of activity" for example). But a skilled user, or AI agent, could triangulate multiple overlapping queries that allow the spend of a company or a person's pattern of bookings to be deduced. Another risk: lurching into oversupply - or undersupply in adjacent sectors - as a result of any intervention. → Appendix G.

