

Intelligent Work Academic Research Initiative

Shaping the Future of Work in Financial Services Enterprises



Trinity College
The University of Dublin



Funded by



Introduction

Zarion and a team of researchers from the Trinity School of Psychology and School of Business are undertaking research about the future of work and the requirements for new intelligent work systems.

This research is being funded by Enterprise Ireland, as part of the Innovation Partnership Programme (IPP).

This project uses human factors, operations management, business process analysis and artificial intelligence knowledge to define innovative and human-centred work concepts (i.e. the workplace of the future) which will optimise worker wellbeing, safety, productivity and efficiency, using novel 'intelligent work' concepts and allied technology systems.

Critically, these systems will deploy artificial intelligence (AI) and Machine Learning (ML) technologies in an ethical manner.

Meet The Team



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Background

Work is part of our wellbeing and a key driver of health.

Workplace IT systems were historically introduced to promote efficiency – there was insufficient attention to issues around the human role in the system, promoting healthy work and worker wellbeing, enabling worker self-efficacy, and augmenting team performance and trust. Now, there is a greater emphasis on fostering trust, the promotion of psychological wellbeing in the workplace, the avoidance of work-related stress and absenteeism and developing ethically aligned technologies. There is a specific focus on technologies that prioritize human wellbeing.

This change is at early stage and is to be valued. We need to design the work and workplace of the future. Operations management usually focuses on business processes, business units or departments, as well as the corresponding tools or technologies to achieve the economic goals for the company. Often the ‘human factor’ and worker wellbeing in the system are not well understood. This leads to errors, suboptimal performance, worker burnout and professionalism challenges. From a business perspective, this has a cost implication (for example, costs of delays/worker productivity, staff retention, sick leave, cost of errors etc.).

New working practices and trends – such as the blended workforce (i.e. mix of human and intelligent resources), the flexible workforce (virtual/remote work, gig economy, work teams with varied contracts) are becoming much more prevalent. The impact of these new trends, paired with new IT enabling workforce analytics, surveillance in work, and workflow orchestration and management presents both risks and opportunities.

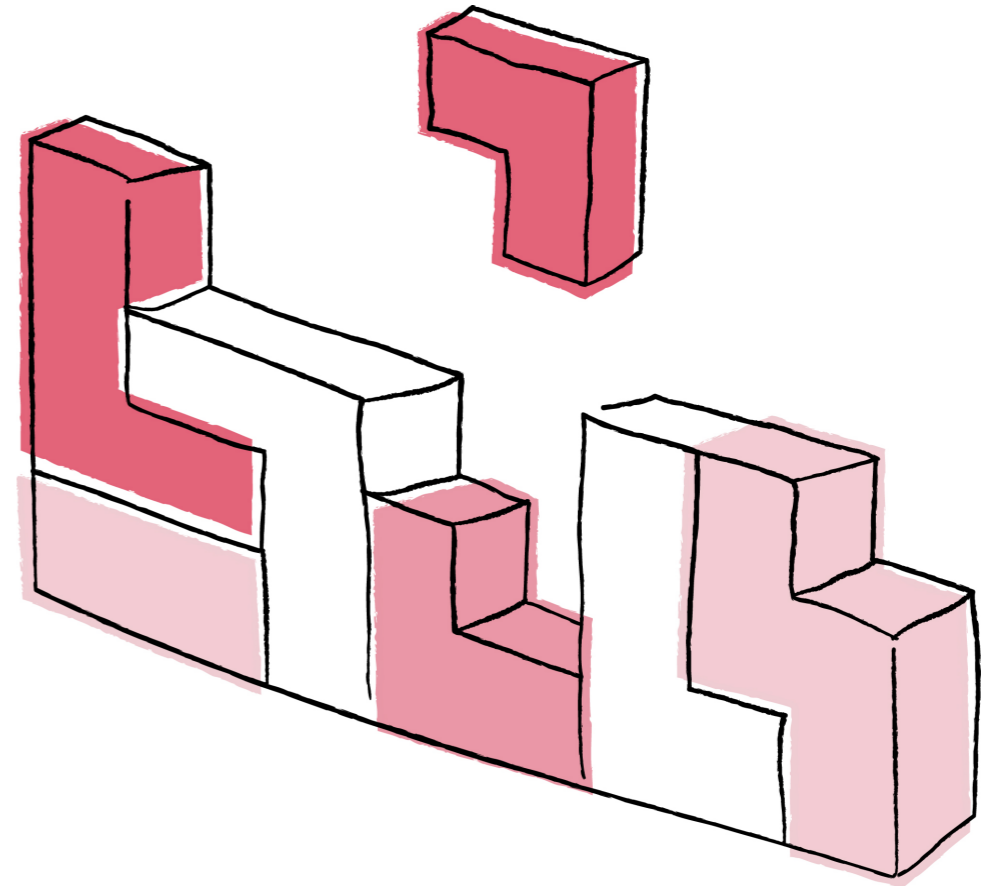
There is a strong human/moral imperative along with a business case to move towards ‘responsible work’ concepts. Performance, work management and workforce surveillance continue to be key human and ethical issues to be resolved in future work systems.

Millennial and Generation Z employees are looking for more autonomy and flexibility in work. With the increased adaption of automation in work, and the use of mobile apps and health monitoring technologies (for example Fitbit), work/life balance is starting to mean something more than was traditionally understood.

The recent development in Artificial Intelligence (AI) has brought significant changes to the workplace, giving birth to the concept of Intelligent Work. While many AI and machine learning applications have been adopted in the business processes, how these changes affect workers' wellbeing and consequently impact the company's revenue remain neglected.

Future human resource management requires better safeguarding in relation to human assets and the application of AI and machine learning to 'human in the system' problems (i.e. link between performance management, operations management, wellbeing protections and data analytics)

COVID has reshaped how work is being undertaken, workplace relationships and how the workforce experience work and communication/interact. Remote work increases the need for trust, social participation (managing worker isolation) and managing worker wellbeing. COVID has underscored the human and ethical issues surrounding work and workforce surveillance.



Research Objectives

New intelligent work concepts/systems must be premised on a rich picture of the human role and requirements from a worker and customer service perspective. Further, it must address the potential barriers to adoption and issues pertaining to stakeholder acceptability and organisational change.

The aim of this research project is to study how AI technologies and workers can work together more efficiently and intelligently to improve the workers' wellbeing and the company's long-term revenue.

We would like to investigate how to augment automated work and people so that work is healthy, workers are healthy, and workers are set up for success.

Specifically, this project will demonstrate how the application of new intelligent work models, concepts and technologies (using machine learning and artificial intelligence) will deliver value across 3 distinct areas:

At a human level

- A healthy and productive workforce
- Worker wellbeing and work/life balance at the fore

From a societal perspective

- Responsible business
- Ethical automation
- Role of human/worker in technologically mediated systems

At a commercial level

- Company profit and sustainable economic success

Underpinning Ethics & Values

The project approach is underpinned by specific ethical principles and values:

Work and wellness should be mutually beneficial for people:

- Many companies treat workers in terms of enterprise resources. Workers are more than commodities/resources. They are human beings! There are benefits to designing workplace procedures and technologies with the human in mind. Further, there are benefits to employees and employers for promoting the concept of self-efficacy.
- Work is part of our wellbeing and a key driver of health.
- Work has an impact on wellness and wellness has an impact on work. (Management of home/work interface)
- Wellness in work contributes to a person's overall health and the quality of their relationships with work colleagues, family, friends, and their community.



Remote / Distributed Resources creates a healthier environment for society

- Remote working is better for the environment with the decrease or removal of commuting, related emissions and a greater work/life balance.

Businesses need consider responsibility to new stakeholders

- New concepts of 'responsible business' and 'regenerative business' reflect a shift, or extension of stakeholder responsibility.
- Moving from a model of responsibility to shareholders (i.e. shareholder primacy), to responsibility to all stakeholders, including employees.
- The introduction of the tripartite labour collaboration includes a third stakeholder – society.

Workplace systems should help businesses to realise the Triple Bottom Line

- Overall, human activity should not compromise the long-term balance between the economic, the environmental, and social pillars (i.e. the triple bottom line).
- In line with this, workplaces systems should be designed to contribute positive benefits across the triple bottom line.

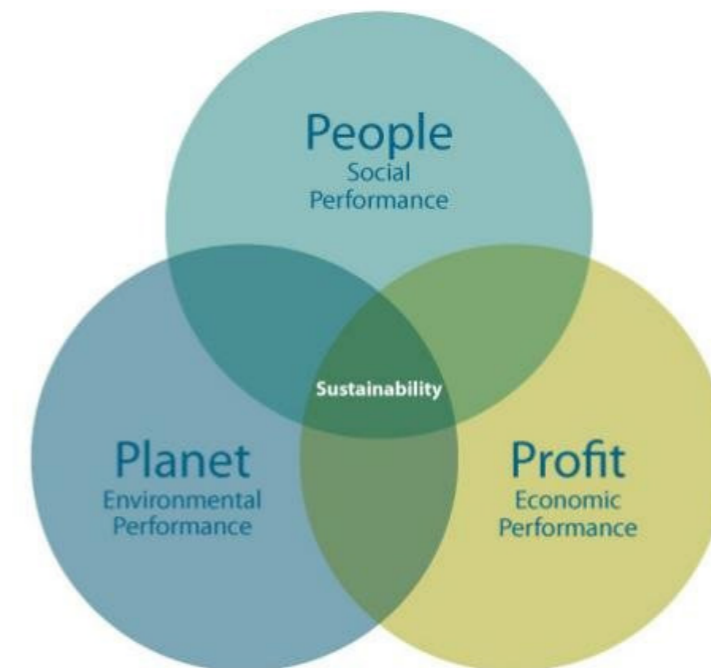


FIG. 1.0: TRIPLE BOTTOM LINE CONCEPT

The COVID Context

This research addresses some of the human and business issues arising in the COVID context

Ethical and human response to challenges:

- Teams working remotely
- Upskilling staff
- Work distribution and monitoring
- Worker monitoring
- Wellness in the workplace (healthy work, safe work, employees fit for work)

Support strategy of business adapting to change and being resilient

Support positive customer experience:

- Avoid diminishing returns by ensuring employees are not at risk of burnout



Learning from Team Members, Supervisors & Operations Managers

On Healthy Work:

“There is a link between work and the person doing it”.

“Are the people who are doing the work coping well with it“.

“Work that you can accomplish in a day – without doing overtime”.

“Able to communicate with people about the work – not under stress as cannot find anybody for help”.

“Fully flexible – when can work – to balance out personal life”.

“Work is always there – health work is about how we approach work and how we support each other as a team”.

“Appreciating what people bring to the table”.

Learning from Team Members, Supervisors & Operations Managers

On Intelligent Work:

“Ensure control is with the person/feel empowered, as opposed to system having control”.

“Makes life easier for an individual”.

“Task assistants – something that reminds you of tasks that you need to do, or what task are priority”.

“How approach work in intelligent and organised way”.

“You have control of how you do your work – manage your work”.

“Having the time to think and not just operational activity – step back”

“Working in a different way – more analytics”.

“Using staff here for more proactive type of work and work that adds value for customers”.

Learning from Team Members, Supervisors & Operations Managers

On Intelligent Technology

“The system should help me keep people happy and productive – these are interlinked”.

“The system should help people feel in a team – this is so important – if there is 10 people in team -and have team spirit – it is like there are 30 people in the team”.

“I need to know what is going on with my team – get behind the numbers”.

“We need dashboards - and we need to see the flow”.

“We need better transparency in relation to what is coming and what is done”.

“I need to quantify and have transparency for all kinds of work – what is in queue and other kinds of work, like knowledge work – this work is not in the system or queue, but it is being done”.

“It needs to help me with work prioritisation (what type of work, what done first, SLA and delivery time) and relationship management – my team members, my supervisor and my customer”.

“The software is quite transactional – we need to know more – for example, how is the person doing”.

“The system might give feedback – how day went, congratulate people/provide recognition, help them connect with their team, help them get support if needed”.

Preliminary Learnings & Insights

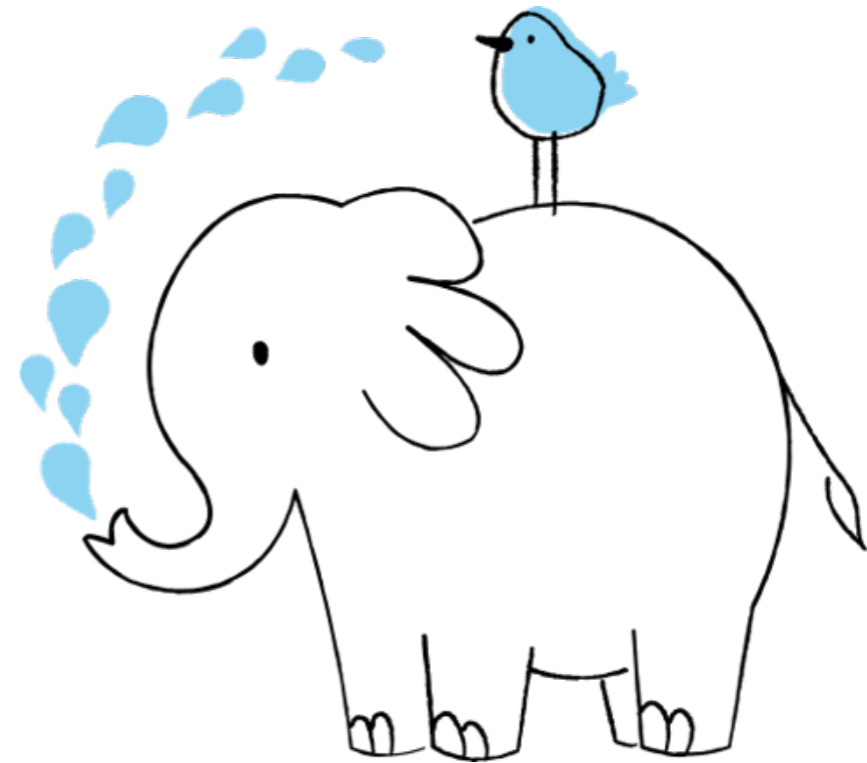
Theme 1: Healthy Work, Wellness & Societal Impact

Employee wellness is a predictor of organisational performance (healthier employees are more engaged in their work and more productive)

Wellness is not understood or expected to be yoga or something that happens in parallel to the 'business of work'. Rather, it needs to be integrated in how work is designed and how workers experience their working day.

Work planning and allocation strategies that address work diversity, worker competency and worker career/development have a positive impact on workers' wellness and by implication productivity.

Work allocation and monitoring systems need to know the person (i.e. identity, motivations/goals, skills, preferences, working styles, cases worked on, teams worked with, achievements)



Preliminary Learnings & Insights

Theme 2: Productivity & Work

Disorganised, fragmented, imbalanced, and unfair workloads can impact on worker productivity, engagement, and 'the flow state'. Technology may not be the barrier here - when there is insufficient information and poor teamwork, productivity significantly decreases.

Productivity does not depend on close supervision and management.

There is a clear link between trust and performance, especially in remote work and teamwork contexts. With the right technology and 'intelligent support', employees can monitor their own performance - as opposed to being monitored by others. In this sense, 'big brother monitoring' equates to distrust.

Increasing trust by allowing employees to both self-monitor and self-manage their own work increases wellbeing along with enhancing performance. This in turn generates cost savings.



Learnings & Insights So Far

Theme 3: Performance

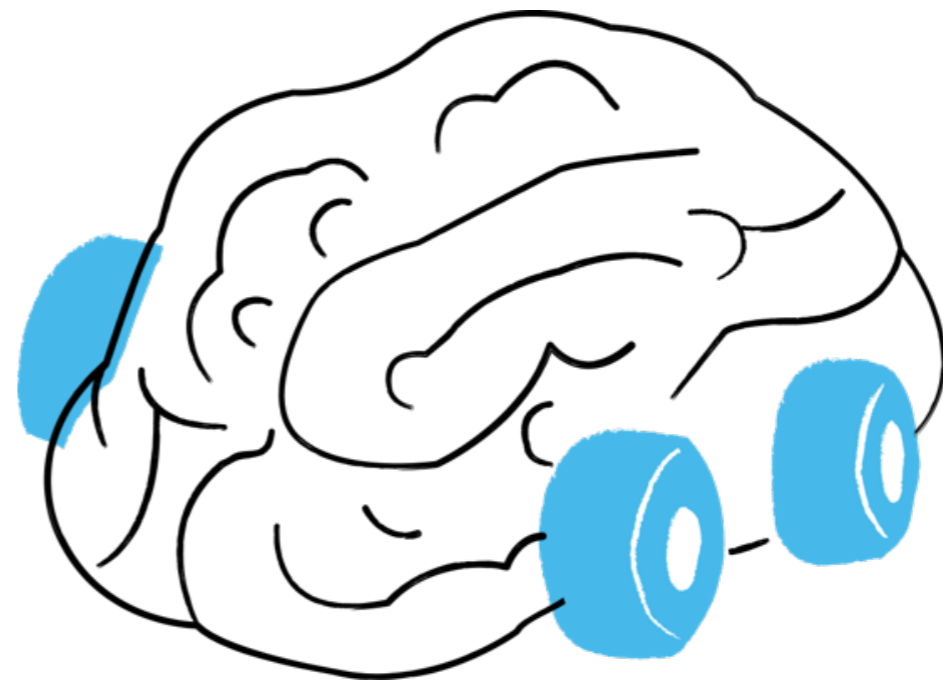
Workplace systems should be designed to motivate supervisors to coach and enable team members to do their best work

Workload, work rate/productivity and quality of work needs to be measured.

Poor quality work results in process inefficiencies, increased work for others, and has an impact on customer relationships.

Being able to seek help from a team member/supervisor and feeling supported if having problems/make mistakes is key to worker wellbeing (i.e. psychological safety and wellbeing culture)

Intelligent work creates a need for 3 levels of automation/intelligence – (1) process automation, (2) robot worker and (3) smart assistance for workers, teams, and supervisors.



Learnings & Insights So Far

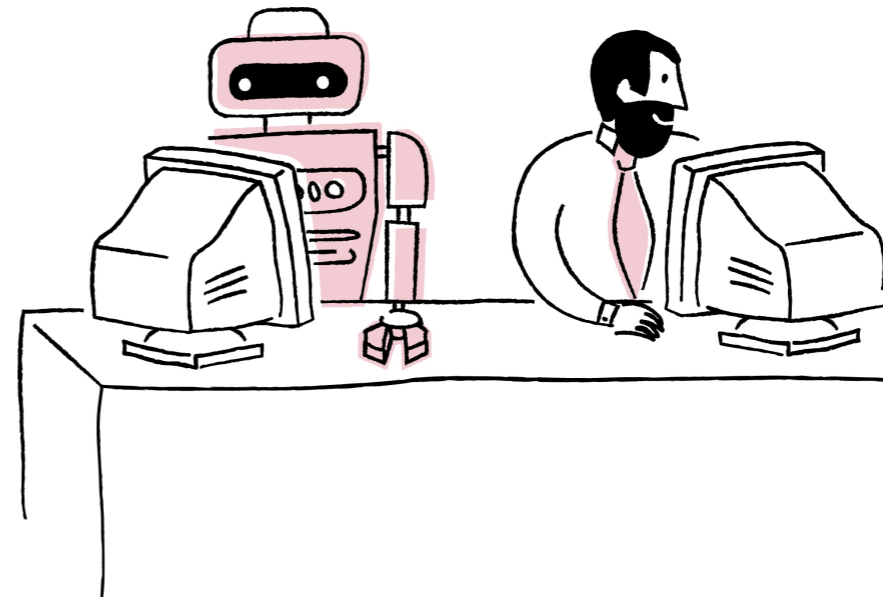
Theme 4: COVID Context

Employers, workforces, and society are now experiencing the 'future of work' and need to have their say in terms of how remote work and the blended workforce is supported by intelligent work systems.

Performance/work management and workforce surveillance continue to be key human and ethical issues to be resolved in future work systems.

The regulator has a role too – regulation needs to change with the changing work landscape.

The future of work involves remote work/collaboration – COVID has not created this - it has accelerated an emerging trend.



Get Involved & Have Your Say

This is a significant opportunity to support the advancement of new work practices and technology for Financial Services.

If you are interested in participating in an interview/co-design session regarding the future of work and intelligent work concepts, please contact:

Stephen Ralph - Product Manager, Zarion
at sralph@zarion.com

Alternatively, you can **participate in our survey:**

https://tcdecon.qualtrics.com/jfe/form/SV_1ztWDa0bAAMMHA1