

Technical Research Report

Pearson Study on Role Redesign for Improved Workplace Productivity

1. Background and Coverage

This report analyzes Pearson's latest research findings on the impact of AI on productivity for technology professionals, focusing primarily on the U.S. market. The document summarizes the survey's key findings, providing background data and offering recommendations to leaders wishing to integrate AI technologies into their operations.

It is intended for: HR/learning teams designing role redesign and reskilling programs.

2. Executive Summary

The Pearson study investigates the impact of AI technology on labor productivity in its current implementation up to 2029. It estimates that AI could help technology professionals save between 5 and 50 hours per month, translating to approximately 5 to 8.8 hours per week, depending on the role.

The research identifies two major categories of automation tools: **Large Language Models (LLMs)** for generating, translating, or summarizing text/code; and **Robotic Process Automation (RPA)** tools for automating repetitive tasks.

However, the study argues that productivity growth alone does not guarantee a company's competitiveness. Rather, companies need to redesign work in a way that ensures time freed up by automation is directed toward innovation and other value-creating activities.

3. Study Design

The Pearson model examined 76,000 distinct tasks in 5,600 jobs.

The model was tested using data from the U.S., India, Brazil, and Australia.

Predicted implementation of 34 AI-related technologies (LLMs, robotic process automation (RPA), natural language text understanding, etc.).

Plotted how effective task-level processes influence job roles.

This is one of the most comprehensive analyses to date of how workplace automation will affect the workforce.

4. Role-Specific Findings

Role	Weekly Hours Saved	Automation Driver	Anticipated Shift in Focus
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Systems Software Developer	Around 5.8 hrs	RPA	Transition to higher-value tasks such as system architecture, integration oversight, and security.
Computer Programmer	About 7.7 hrs	Chatbots (LLMs)	Move from coding to AI oversight (codebase design and improvement).
Systems Engineer / Architect	About 6.0 hrs	Chatbots (LLMs)	Increased focus on compliance and the long-term strategic perspective of the software infrastructure.
System Analyst	Around 7. 6 hrs	Chatbots (LLMs)	Focus on enhancing data-driven consulting, business alignment, and strategic decision-

			making.
Network Architect	About 8. 8 hrs	RPA	Refocusing on cybersecurity, resilience planning and infrastructures innovation.

5. Strategic Implications

Pearson identifies three strategic imperatives for organizations:

- Redesign Roles—Don't Just Automate Tasks

Companies that successfully pivot human efforts toward strategic, analytical, and creative tasks will realize greater profitability than those that use AI merely for cost-cutting.

- Upskilling and Talent Development

As lower-level responsibilities are automated, workers need to be trained to perform higher-level duties. If employees are not retrained, the hours freed by automation will be misallocated.

- Retention Through Enrichment

Role enrichment is identified as a key factor affecting employee fulfillment, which in turn boosts employee retention. When employees gain autonomy and creativity, they tend to remain focused on performing their duties.

6. Implementation Recommendations

- Conduct Task Audits: Identify which types of tasks are more amenable to automation.

Implement Specific AI Tools

- Redesign the Job Descriptions: Make sure they reflect new responsibilities and expectations.
- Invest in Continuous Learning: Create AI training pipelines to boost higher-level problem-solving and strategic skills.
- Measure and Iterate: Assess the effects on productivity, employee engagement, and innovation.

7. Conclusion and Outlook

The Pearson study found that time is a key resource which AI helps to save. By 2029, the productivity gains could offset a significant portion of past wage losses to outsourcing. Over 8 hours a week and 400 hours a year for just one employee.

Organizations that choose to redesign jobs will reap additional benefits related to employee retention, resilience, and innovation. Organizations that fail to redesign jobs risk making their employees feel excluded and marginalized by automation, rather than empowered.