


# Unexpected consequences of GenAI for globalisation.

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RIETI BBL

**IMD** / Real learning  
Real impact

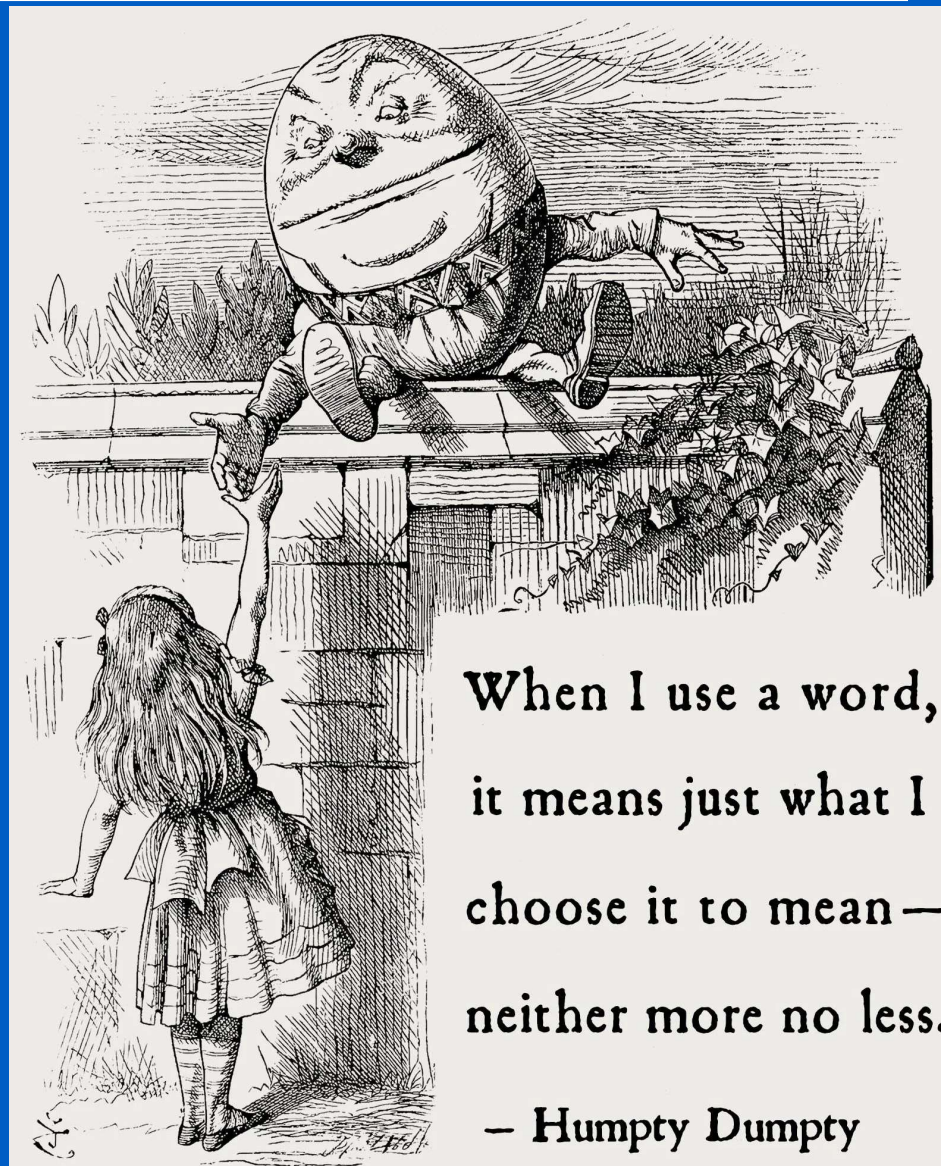




The future is already  
here – it's just not  
evenly distributed.

- Gibbons

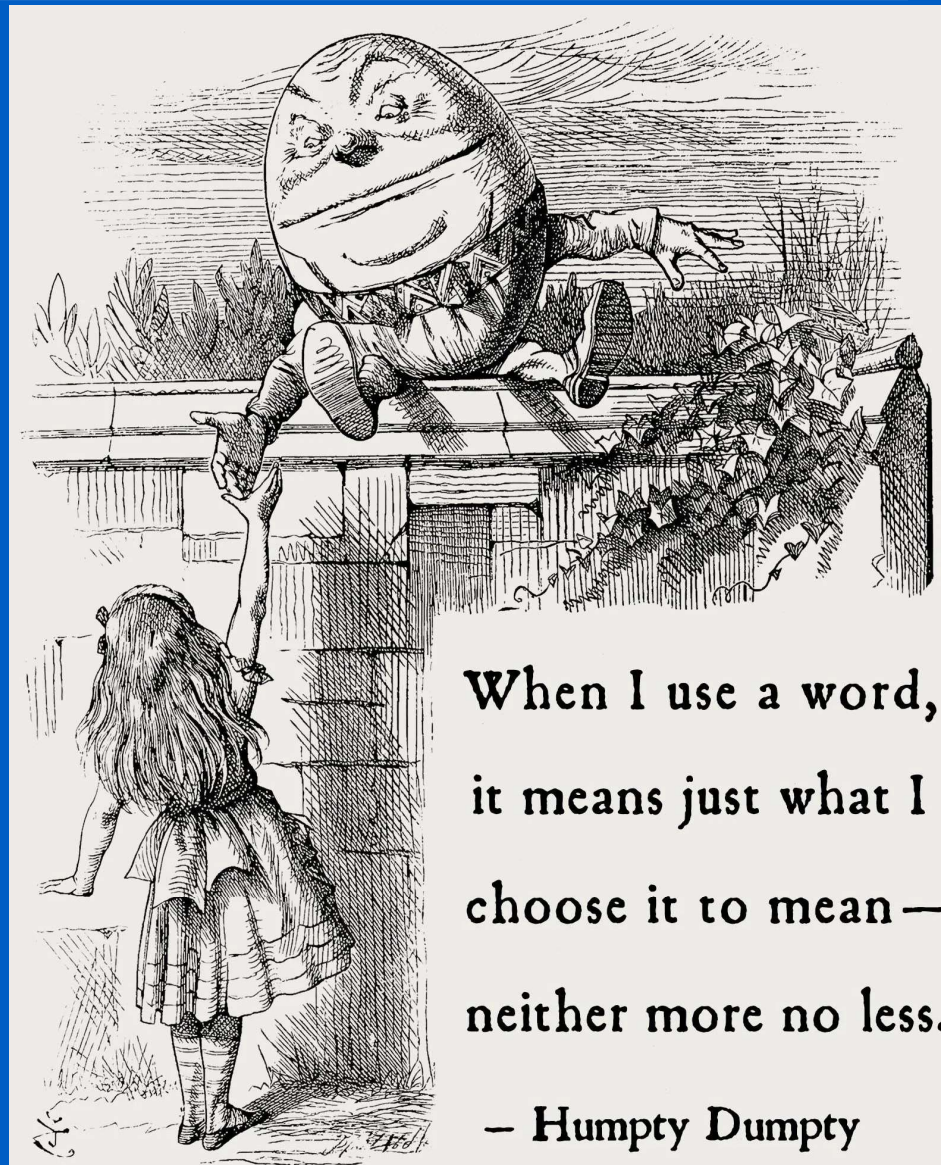
Today we focus  
on GenAI only.



**When I use a word,  
it means just what I  
choose it to mean—  
neither more no less.  
— Humpty Dumpty**

# GenAI helps humans:

- Generate content.
- Find, summarize & analyze info.



**When I use a word,  
it means just what I  
choose it to mean—  
neither more no less.**

**— Humpty Dumpty**

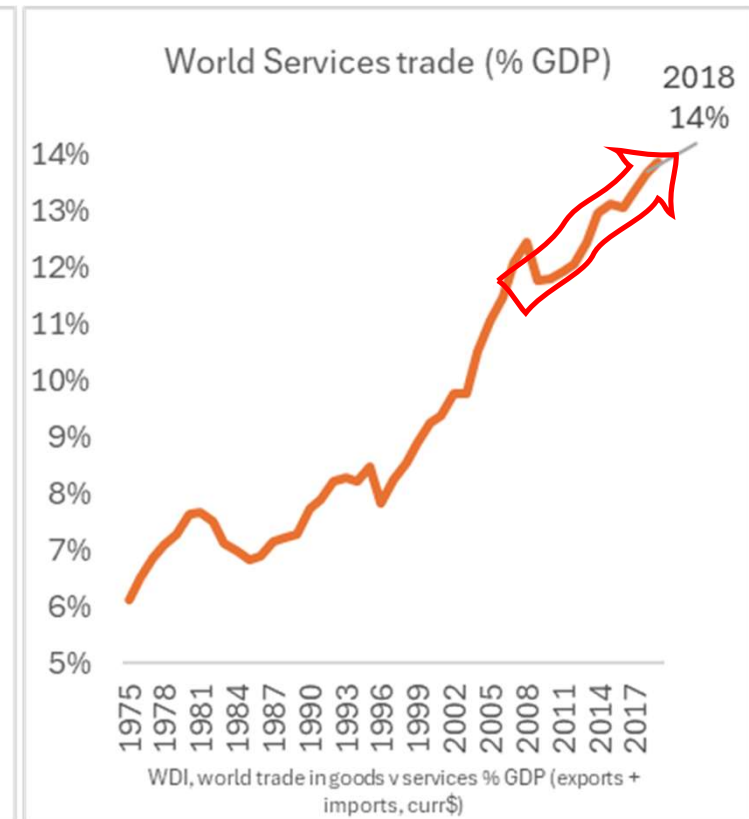
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Goods trade peaked.

Services trade didn't.

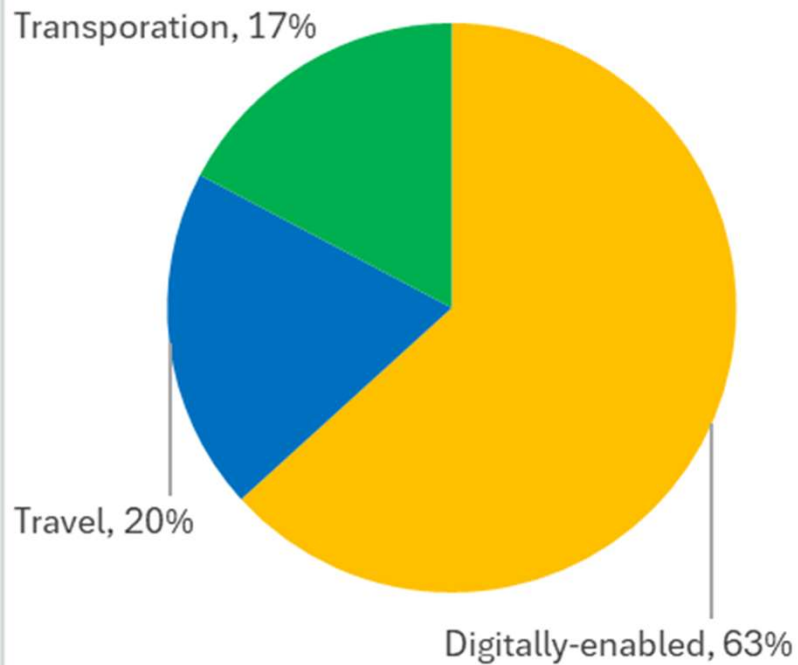
Goods exports ratio fell since 2008; Services exports did not fall.

## World goods v services trade (% GDP) 1975-2018.

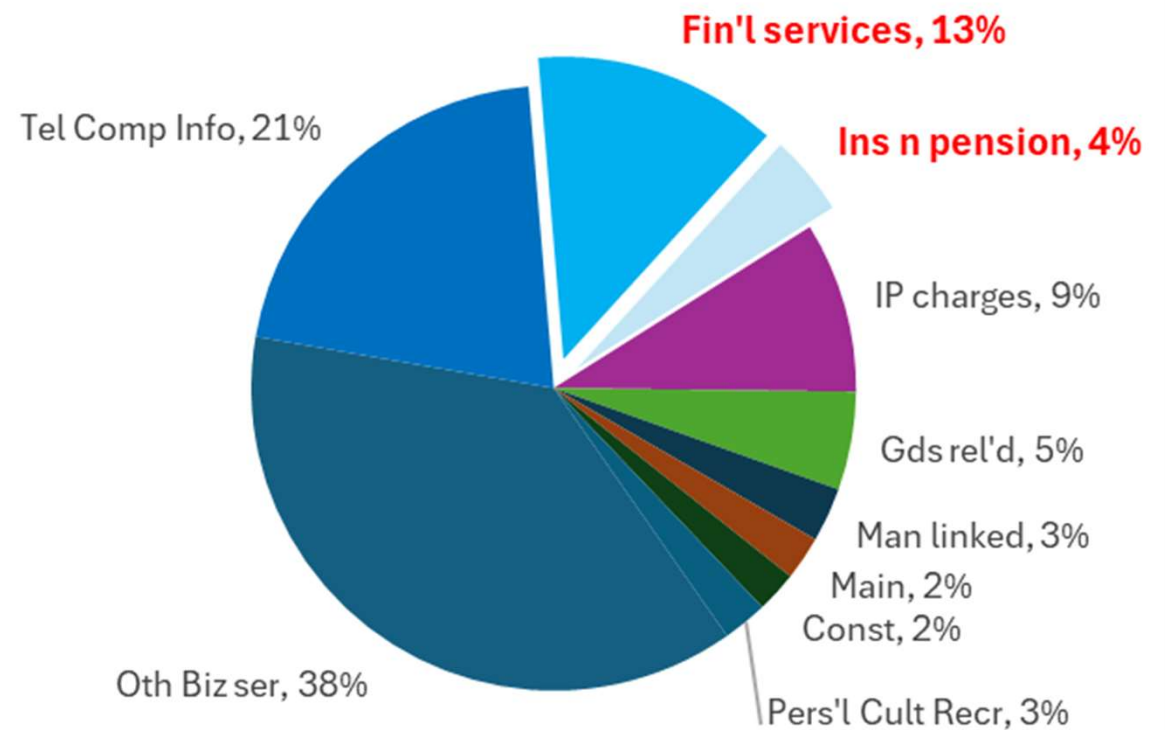


# What are digitally-enabled services?

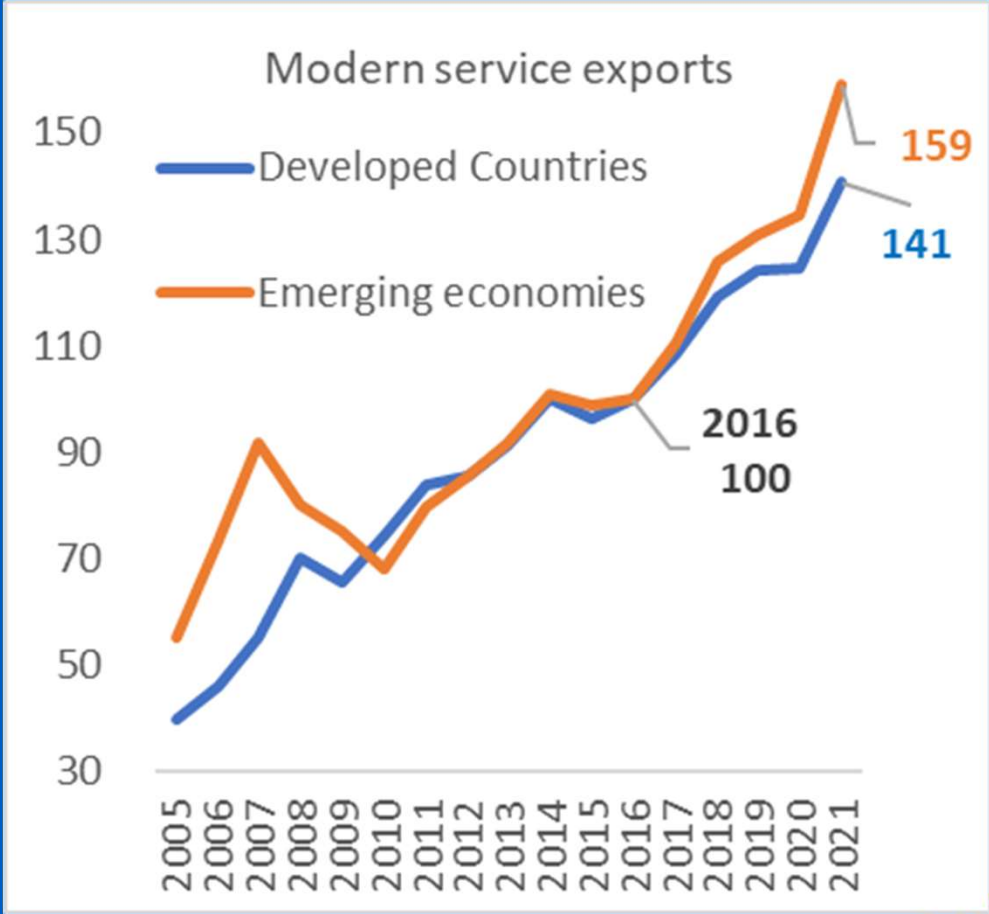
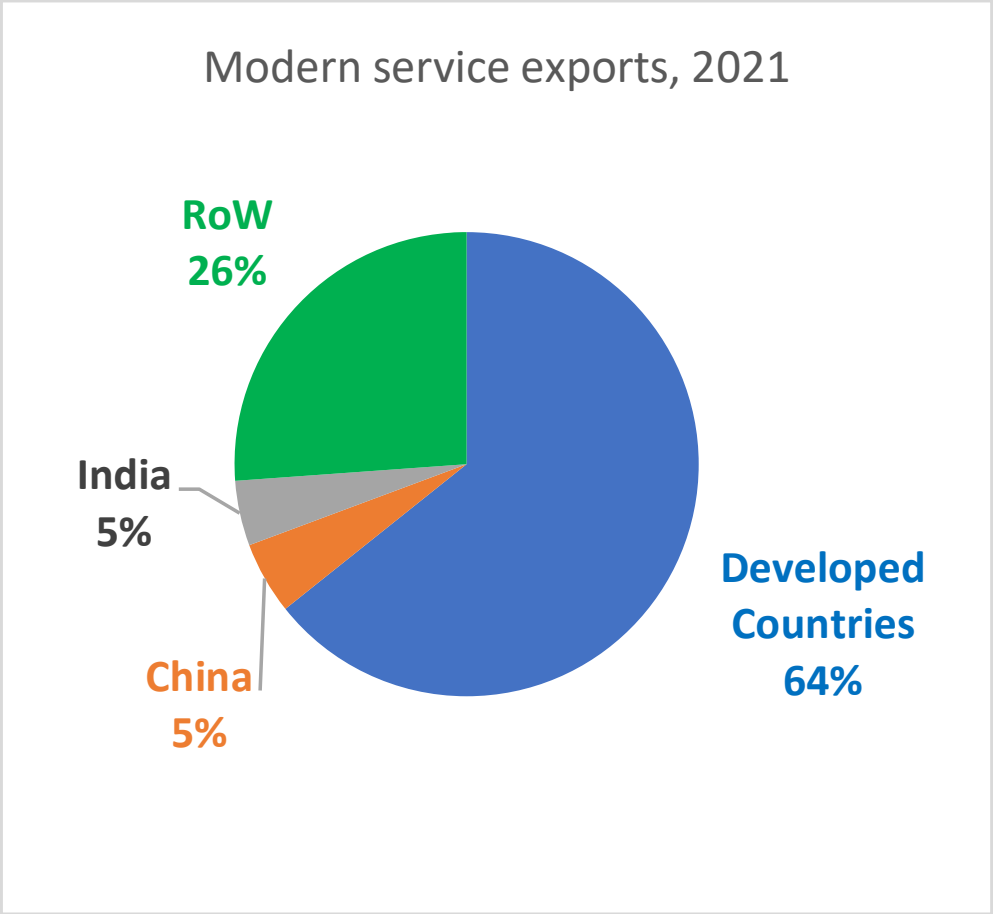
All services, 2023



Digitally-enabled services decomposition, 2023



# Digitally-enable service exports: Developing world share low but growing faster.





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# What will GenAI do?

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# What will GenAI do?

- I will argue that GenAI is likely to make foreign & domestic teleworkers better substitutes.
- GenAI will thus accelerate trade in intermediate services.

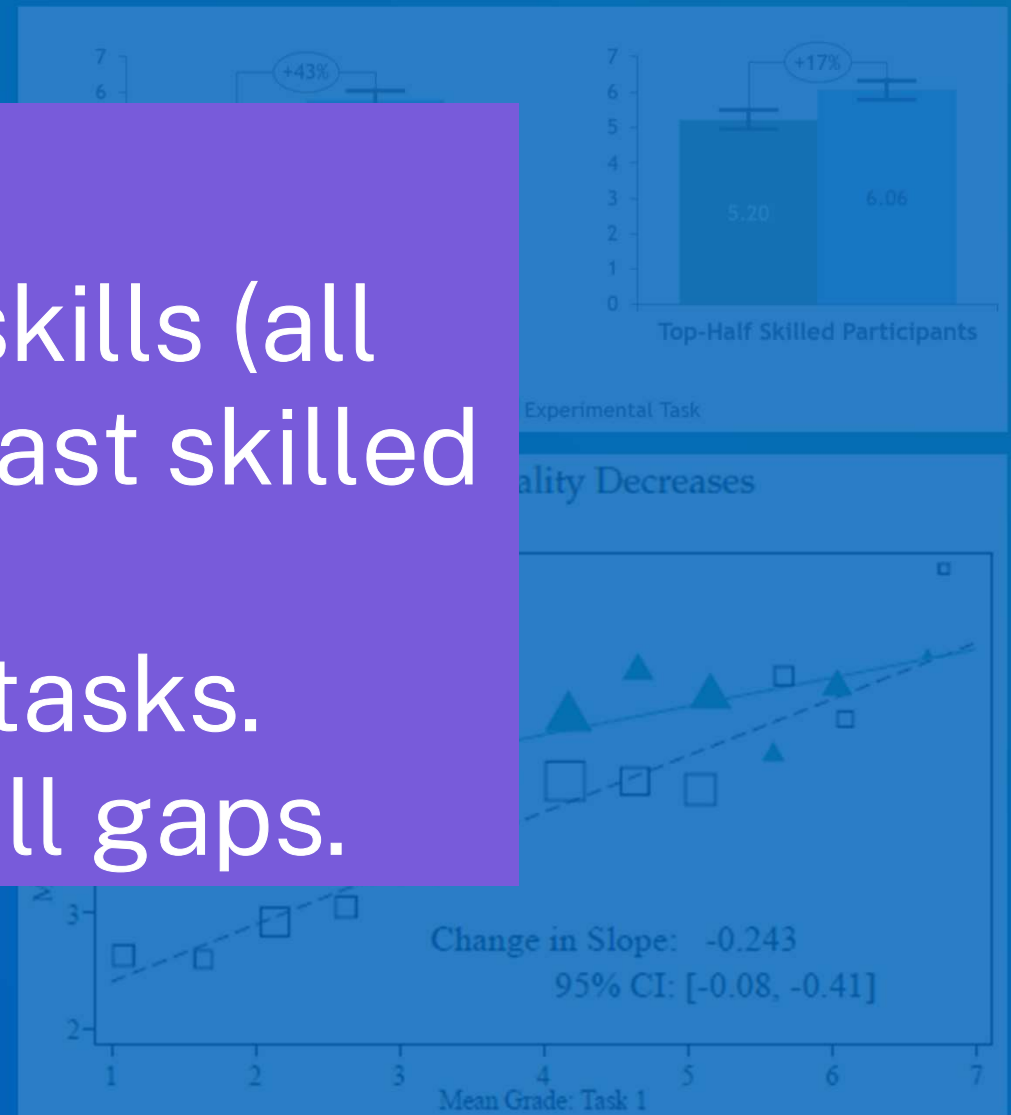
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Anchor insights about  
what GenAI does &  
does not do.

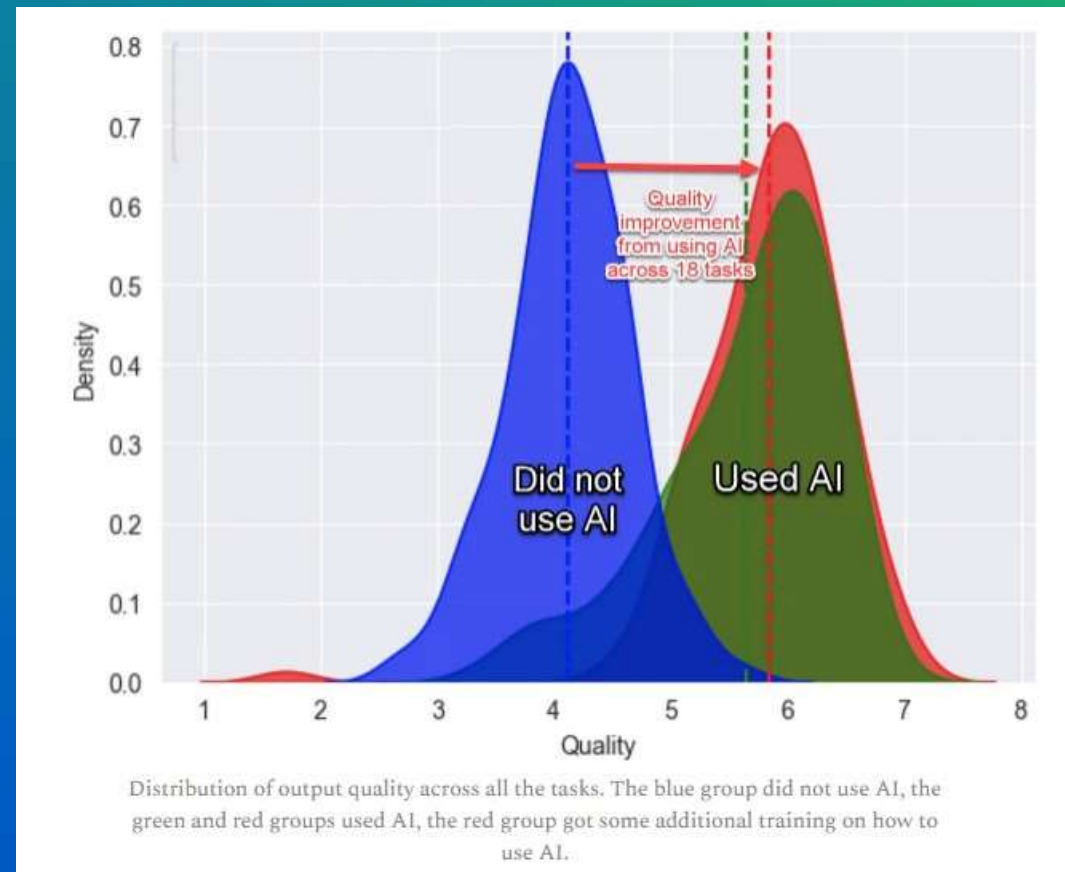
- Research shows ChatGPT speeds up average workers.
- But gains are biggest for the least skilled workers.

Insight:

- Levels-up skills (all gain, but least skilled gain most).
- But not all tasks.
- It fills in skill gaps.



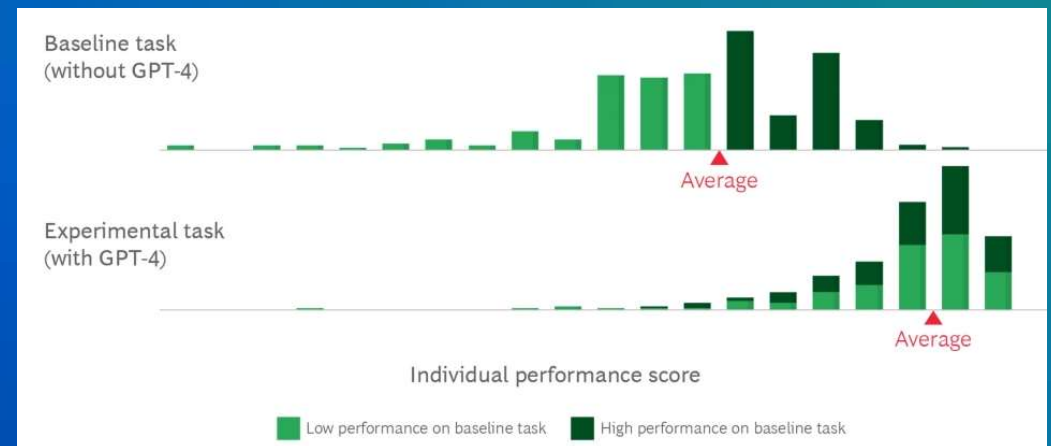
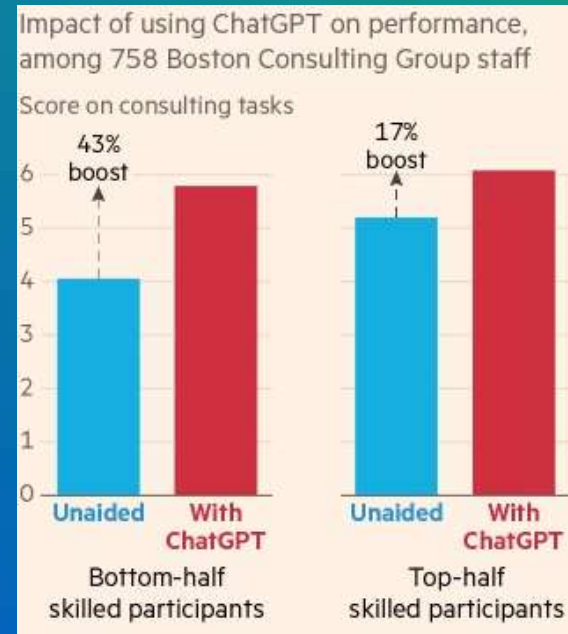
#. ChatGPT reduced time (25%) & increased quality (40%) for consulting tasks.



750 BCG consultants worldwide as subjects

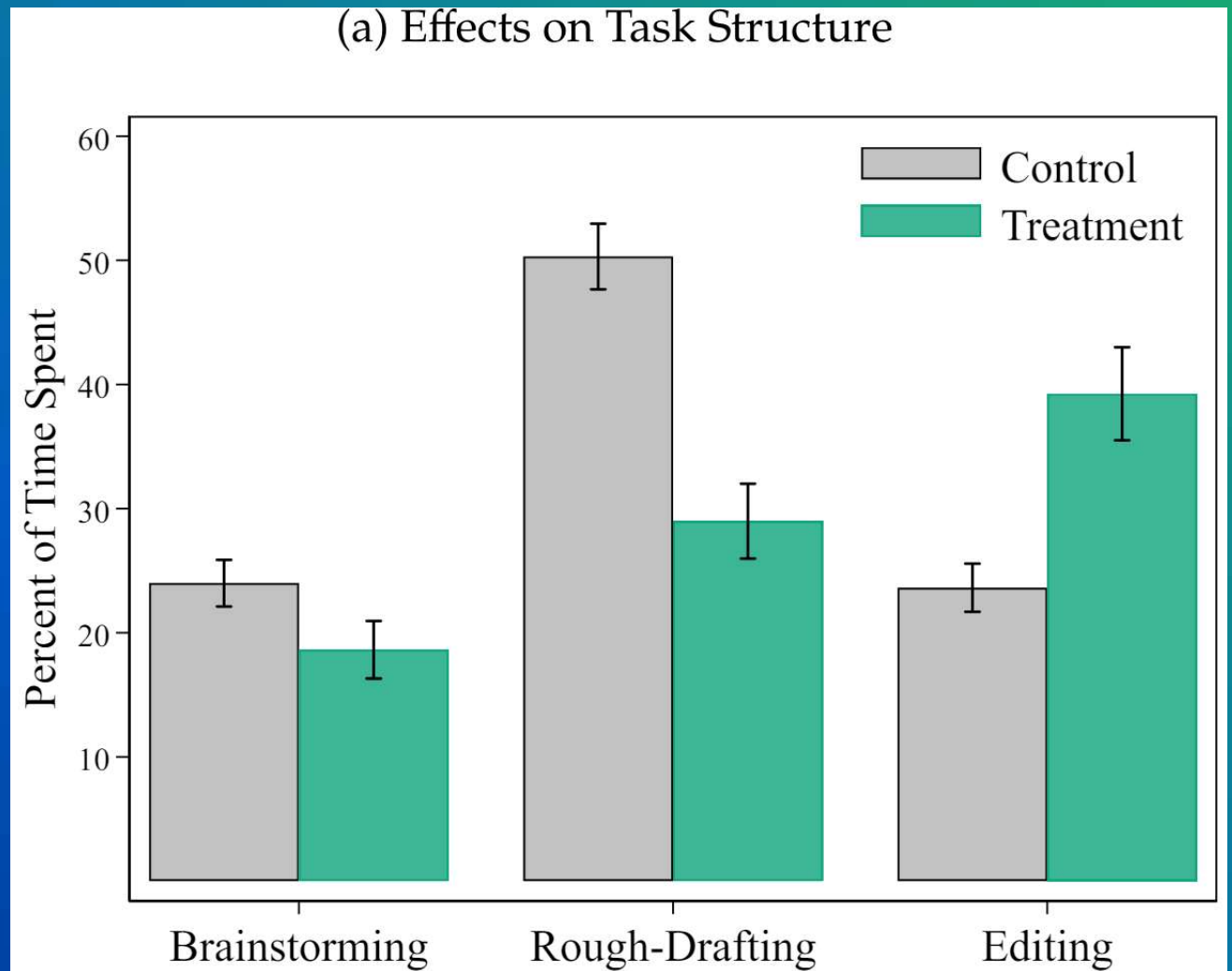
#. ChatGPT increased speed & quality on average...

but gave the biggest boosted to the least skilled workers.



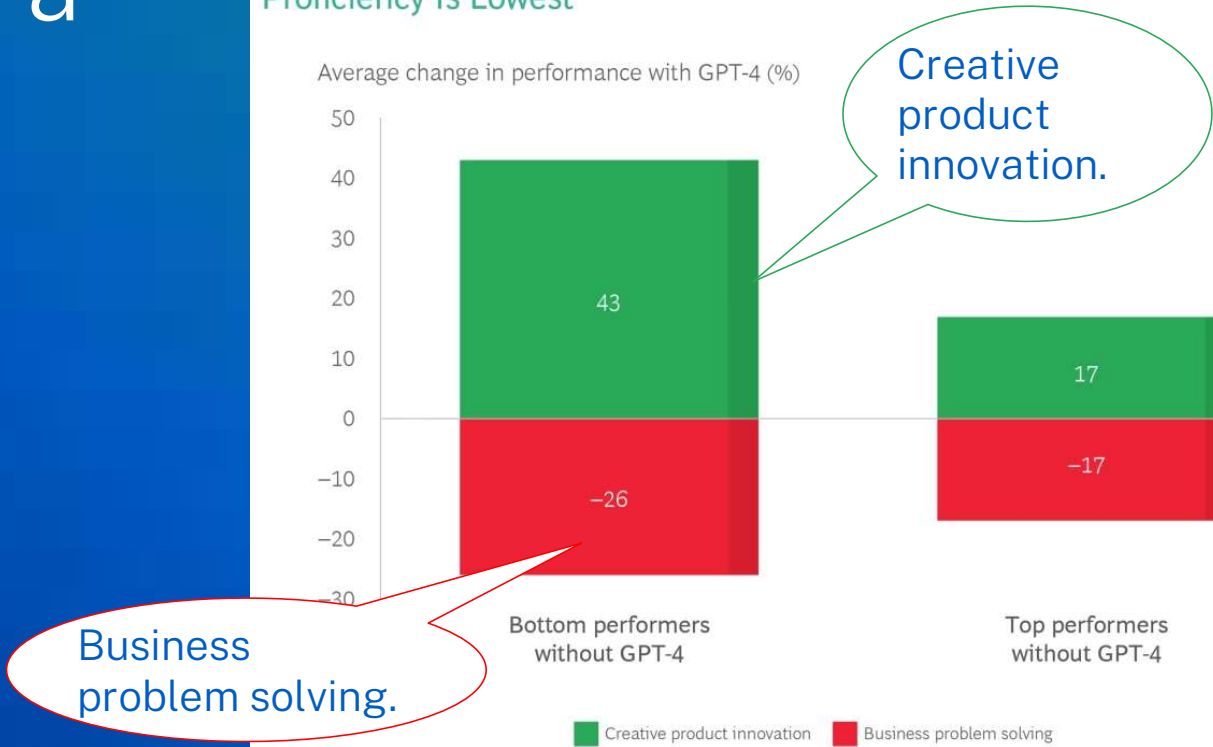
Time savings  
with a twist:

It changed  
the time  
share  
distribution.



# Quality with a twist.

Exhibit 2 - Generative AI's Performance Effect Is Strongest When Baseline Proficiency Is Lowest



Sources: Human-Generative AI Collaboration Experiment (May-June 2023); BCG analysis.

Note: Bottom and top performers are identified on the basis of baseline proficiency (performance on baseline task, without the use of GPT-4). For creative product innovation, % change refers to the average change in individual performance relative to the baseline task. (Note that the change in performance for the average participant as presented in Exhibit 1 is not an arithmetic average of the figures in Exhibit 2.) For business problem solving, % change reflects the performance difference between the experimental and the control groups.



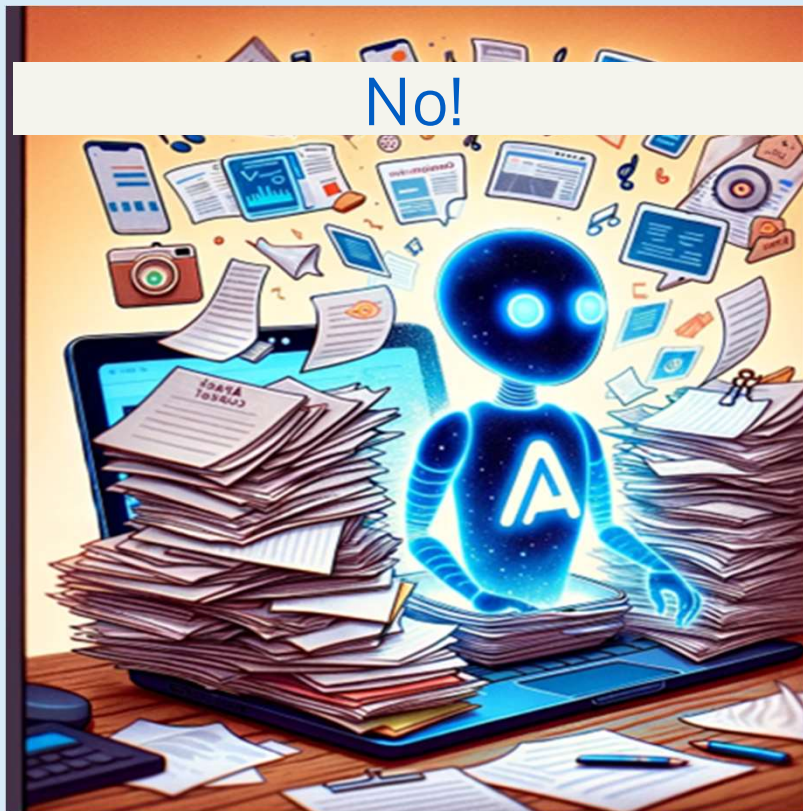
- Research shows ChatGPT speed averages
- But gains biggest the least workers.

Insight:  
GenAI doesn't automate work.

It augments workers.

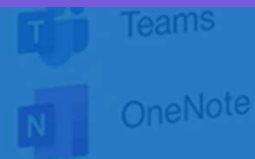


# #. GenAI doesn't automate; does not work on its own.



GenAI  
Like  
Insight:

GenAI will have  
economy-wide effects  
on jobs, employment &  
incomes.



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#. Service production processes are very different than industrial processes.

Industry:  
Standardize output.  
Optimised, predictable  
production.



Industry:  
Standardize output.  
Optimised, predictable  
production.



Services:  
Customized output.  
A long tail of unfilled tasks &  
messy compromises to meet  
the deadline.  
Productivity => more task  
done per output.





Insight:

GenAI won't work  
like industrial  
automation.

May change quality  
not output.

#. GenAI is not CapEx.

It is not technology you buy.

It is a service input, like MS Office.

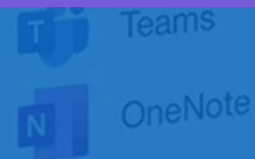
All firms will use it.





GenAI  
Like  
Insight:

All firms will use GenAI  
to stay competitive,  
not to gain  
competitiveness.



# Conjecture

- GenAI's productivity will be absorbed by the long tail of unfilled service tasks & messy compromises that characterize so much of service production.

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Bold analogy.

How much time did you save with these great time-saving innovations?

Smart phone?  
Laptop?

*(are you finishing the day's work in less time because of these great time savers & quality boosters???)*

# Domestic vs foreign teleworkers.

Teleworkers in G7 tend to be more productive, but also more expensive.

- GenAI reduces the productivity & quality difference, but not wage difference.

- This will boost international telework.

My recent, unpublished research...

Insight:

GenAI makes domestic and foreign online service workers more substitutable.

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# Methodology.

Hired four sets of online professional workers (at least university education).

- 50 Americans using AI
- 50 Americans not using AI
- 50 South Africans using AI
- 50 South Africans not using AI

Each did three tasks:

- Administrative work: drafting an email
- Creative work: creating an ad concept
- Analytical work: analyzing sales growth data.

Quality assessed using a grading rubric with NLP techniques to analyze different aspects of the responses, e.g. professionalism, cultural sensitivity, technical accuracy. Speed of response was also collected.

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# Task 1

*You are working for a consulting firm that has been engaged by **GlobalTech Solutions**, a US-based mid-sized tech company that recently expanded into new international markets. Your task is to draft an email report to one of the company's key clients, summarizing GlobalTech's recent performance and proposing a strategy to address some of the challenges they are facing in these new markets.*

# Task 2

**Objective:**

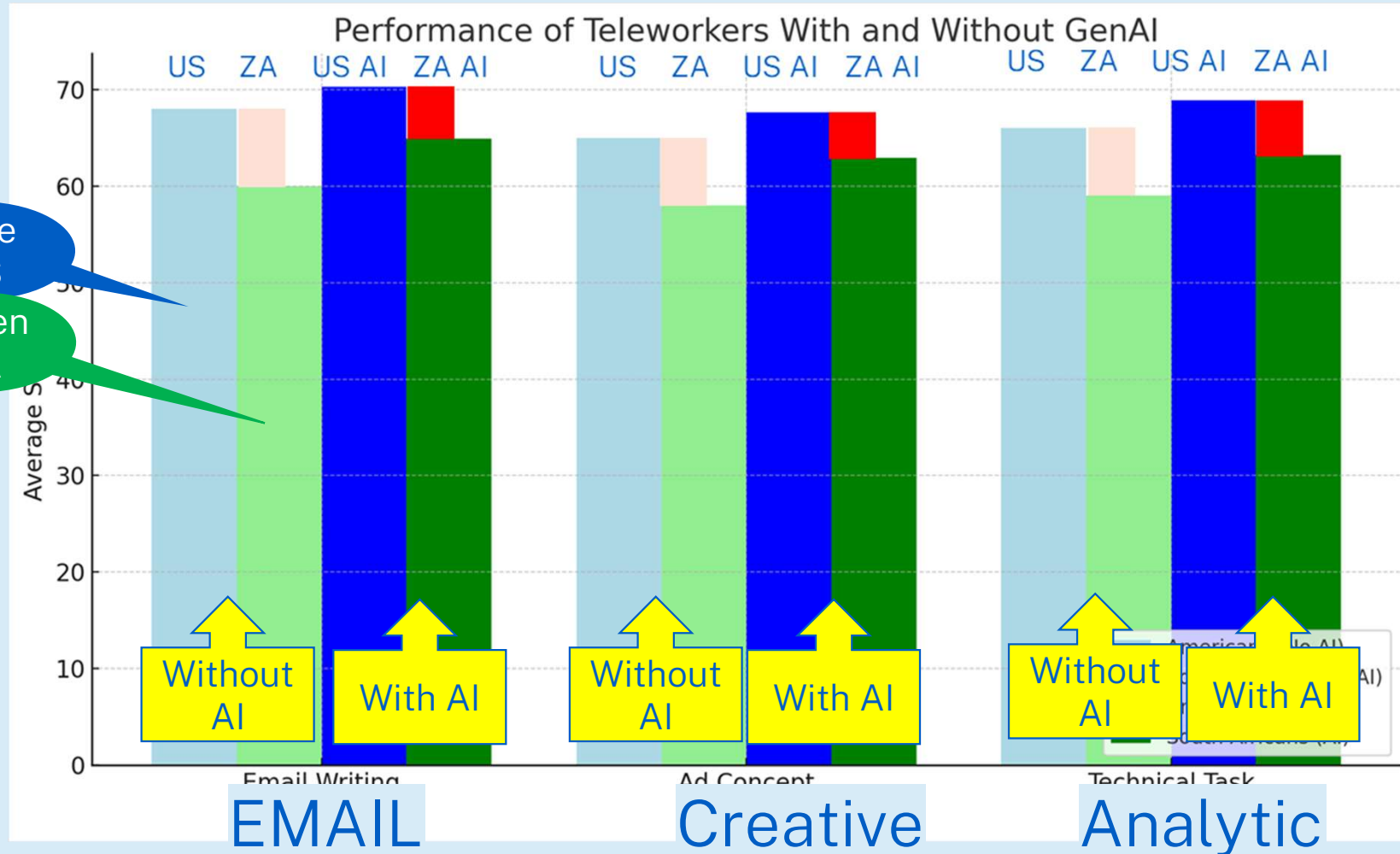
Develop a creative and culturally adaptable concept for a 60-second advertisement promoting a new product from a global brand.

# Task 3

**Logical Data Analysis for Growth Potential**

**Scenario:** You are a data analyst for a retail company that is evaluating its product lines to determine which category shows the highest growth potential. You have been provided with sales data for three different product categories over the last four quarters. Your task is to analyze the sales trends and identify which product category has the most promising growth potential. You will need to calculate the growth rates, interpret the trends, and justify your conclusion.

# Experiment: 4 groups, 3 tasks.

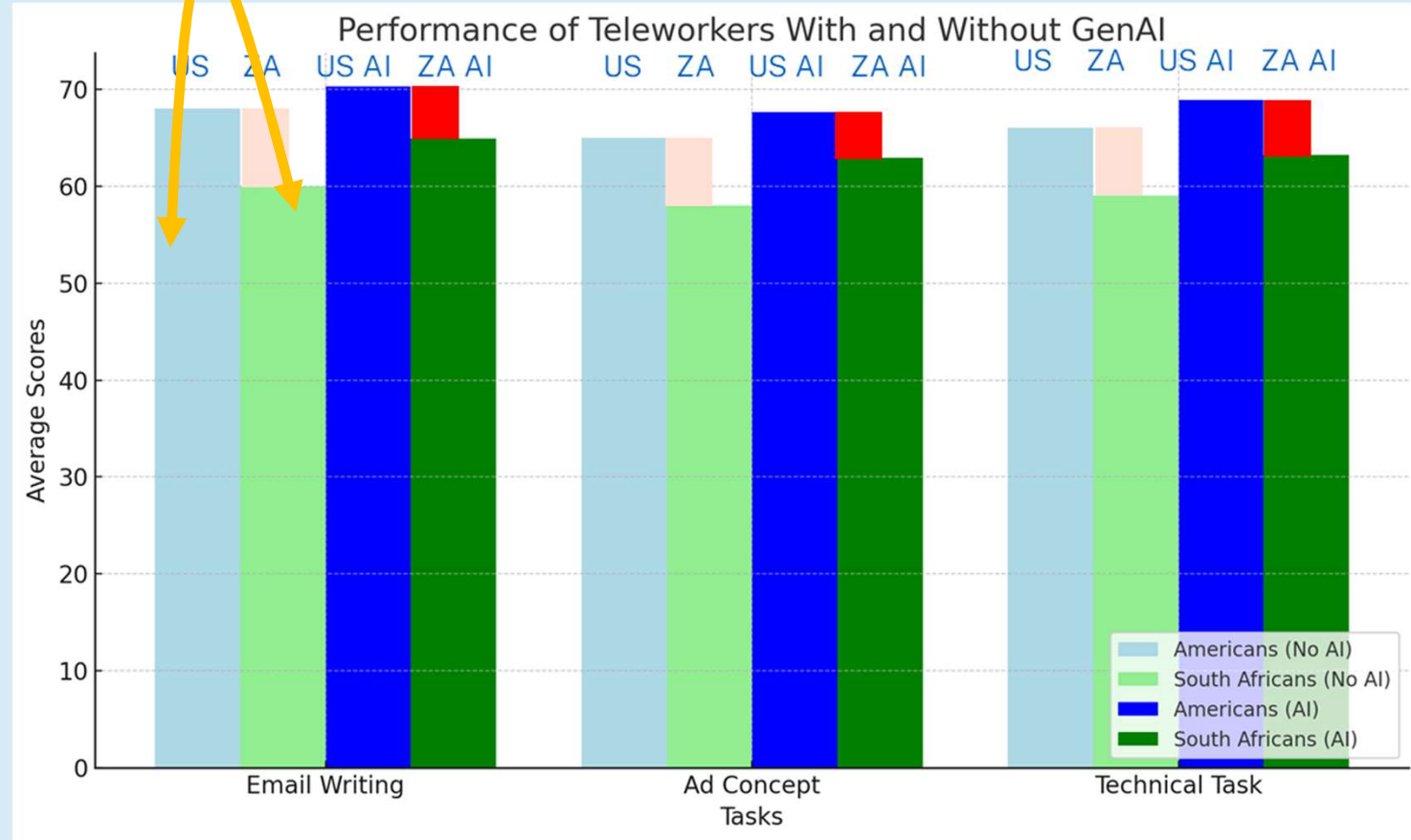




# Results: Levelling up.

1. US workers scored better in every task, with and without AI.

Blue (US) is always higher than green (ZA)

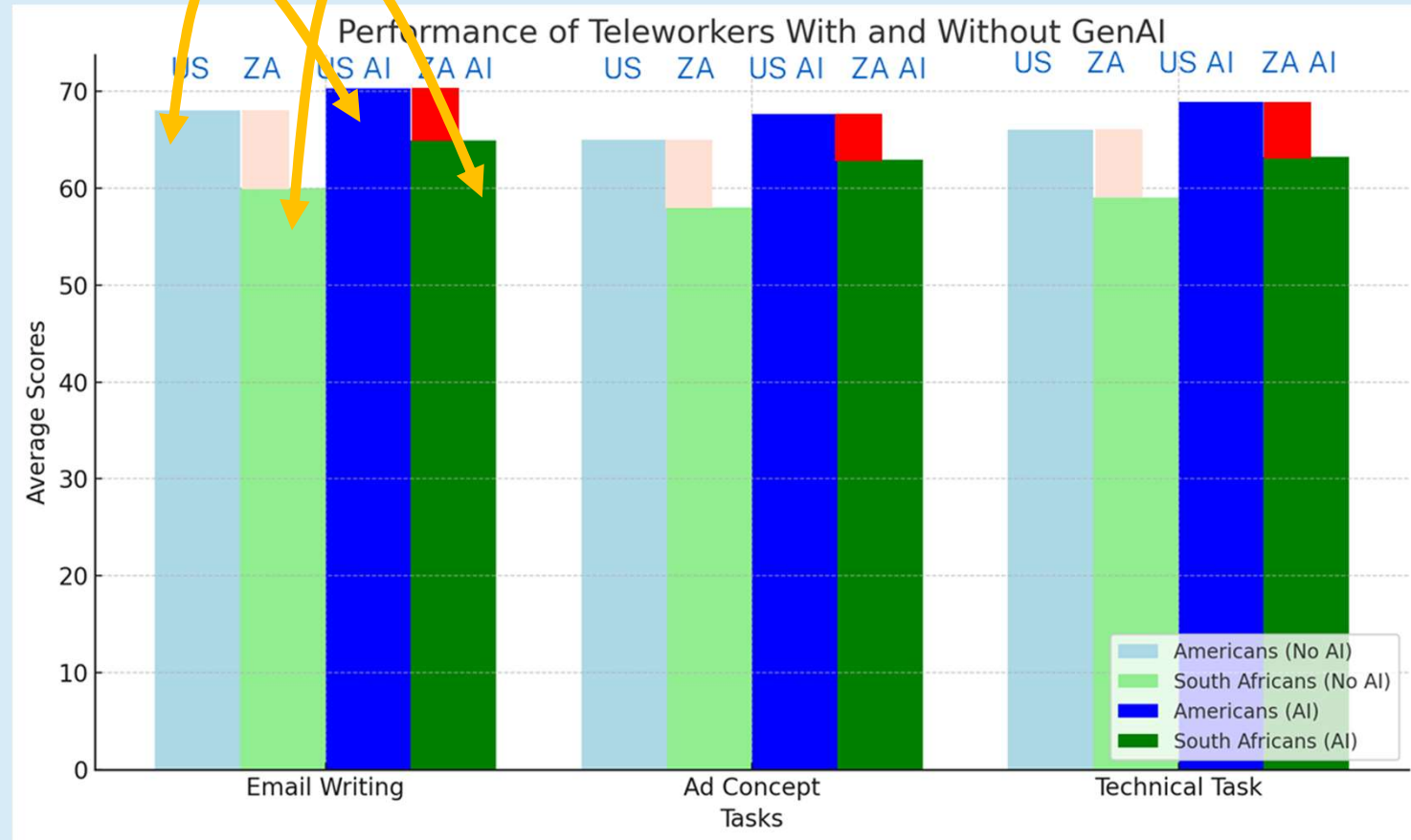


# Results: Levelling up.

1. US workers scored better in every task, with and without AI.

2. GenAI usage raised average score for US & ZA workers.

Dark coloured bars always higher than light ones.



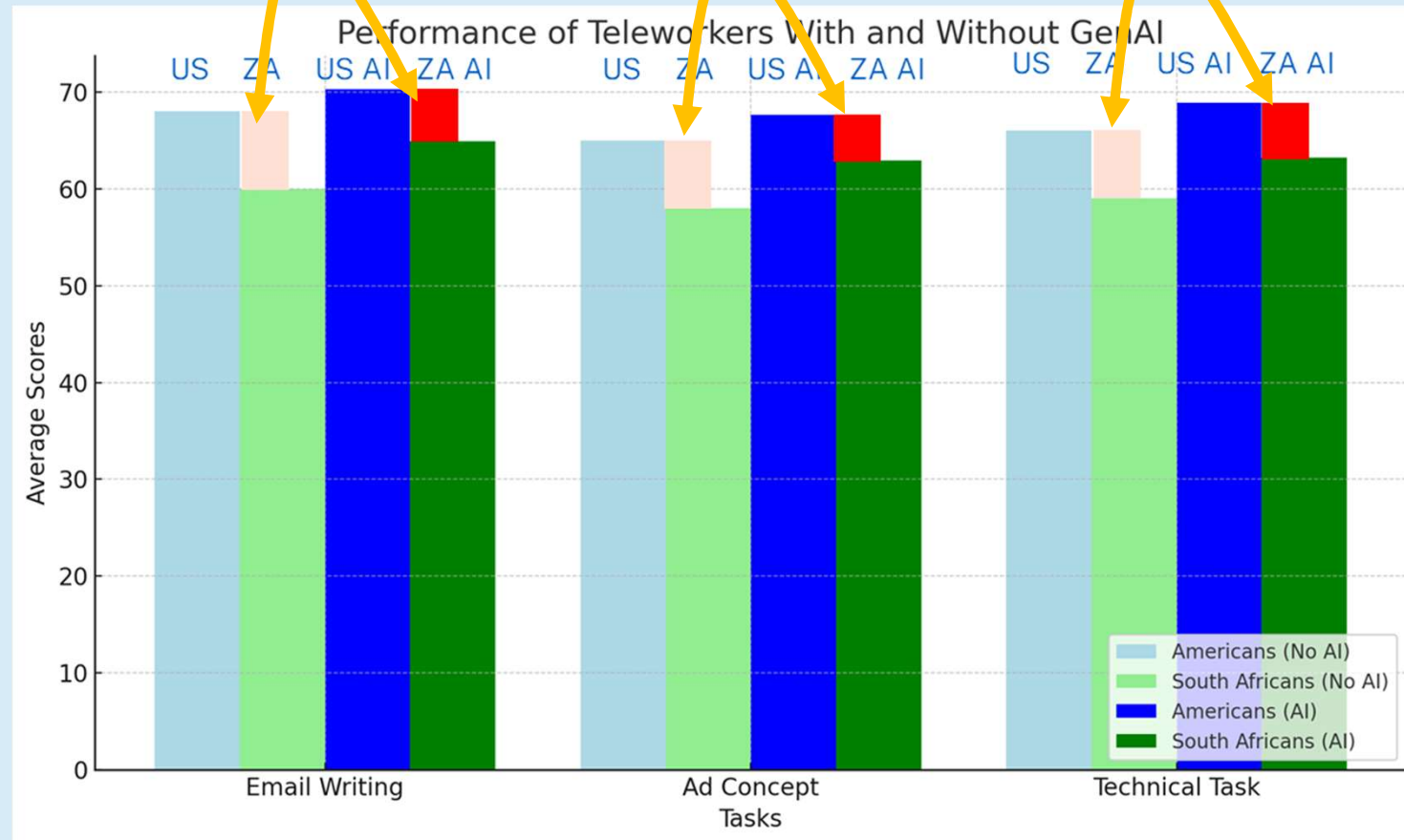
# Results: Levelling up.

1. US workers scored better in every task, with and without AI.

2. GenAI usage raised average score for US & ZA workers.

3. GenAI usage equalises upwards. ZA workers gain more.

Gap is narrower with GenAI usage



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Thus:  
GenAI made ZA workers  
better substitutes with  
US workers in  
value/USD terms.

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## Second round experiment.

- We took the 600 answers (4 groups, 3 tasks) and paid US online professionals to classify the answers.
  - Done by a US worker, or foreign worker?

## Are they US or ZA workers?

- We took the 600 answers (4 groups, 3 tasks) and paid US online professionals to classify the answers.
  - Done by a US worker, or foreign worker?

### Results:

- Without GenAI use, 60% classified correctly.
- With GenAI use, basically random classification.

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GenAI made US & ZA  
workers closer  
substitutes in  
absolute terms.

# SimulST: Simultaneous Speech Translation

- SimulST is instant speech to speech.
- Simultaneous translation allows much more natural flow of conversation.
- Getting better fast.
- Will be widespread soon.

'Timekettle WT2 Edge' is close to simultaneous





## What will GenAI do? My conclusion.

- GenAI levels up productivity/quality.
- GenAI reduces cultural differences.
- GenAI-driven simultaneous speech translation reduces language barriers.

*ERGO:*

- GenAI will make foreign & domestic teleworkers better substitutes, and thus turbocharge trade in intermediate services.

Expect a  
global tidal  
wave of  
talent.



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# And so?

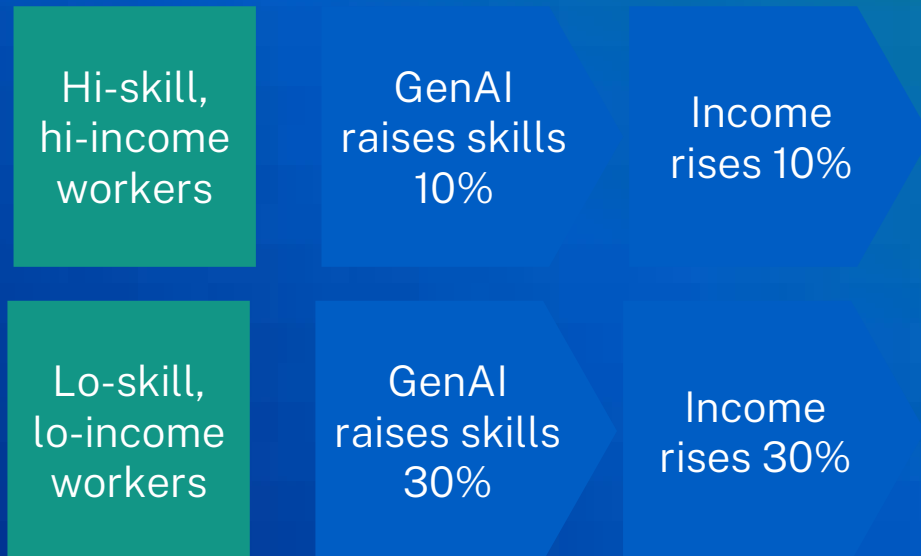
# My reasoning:

Hi-skill,  
hi-income  
workers

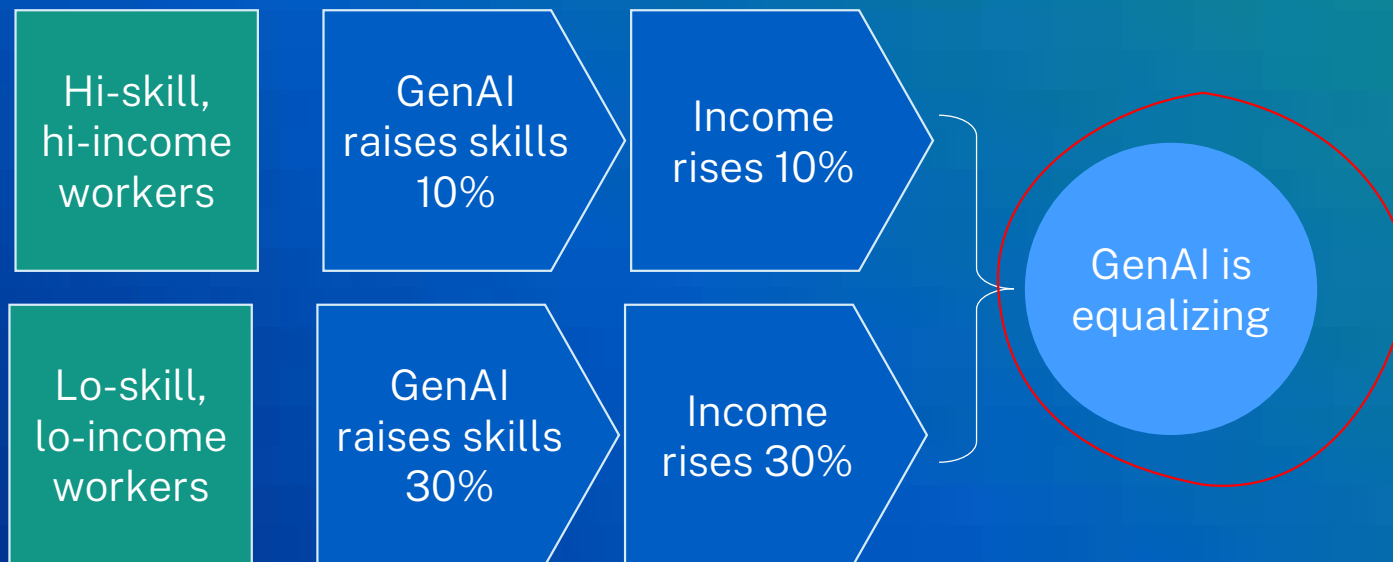
GenAI  
raises skills  
10%

Income  
rises 10%

# THUS: GenAI levels incomes.



# THUS: GenAI levels up incomes.



# Recap: GenAI as the great equalizer.

GenAI levels up skills.

With little jobs displacement.

So, GenAI will raise middle-class incomes more.



# GenAI as the great equalizer.





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END

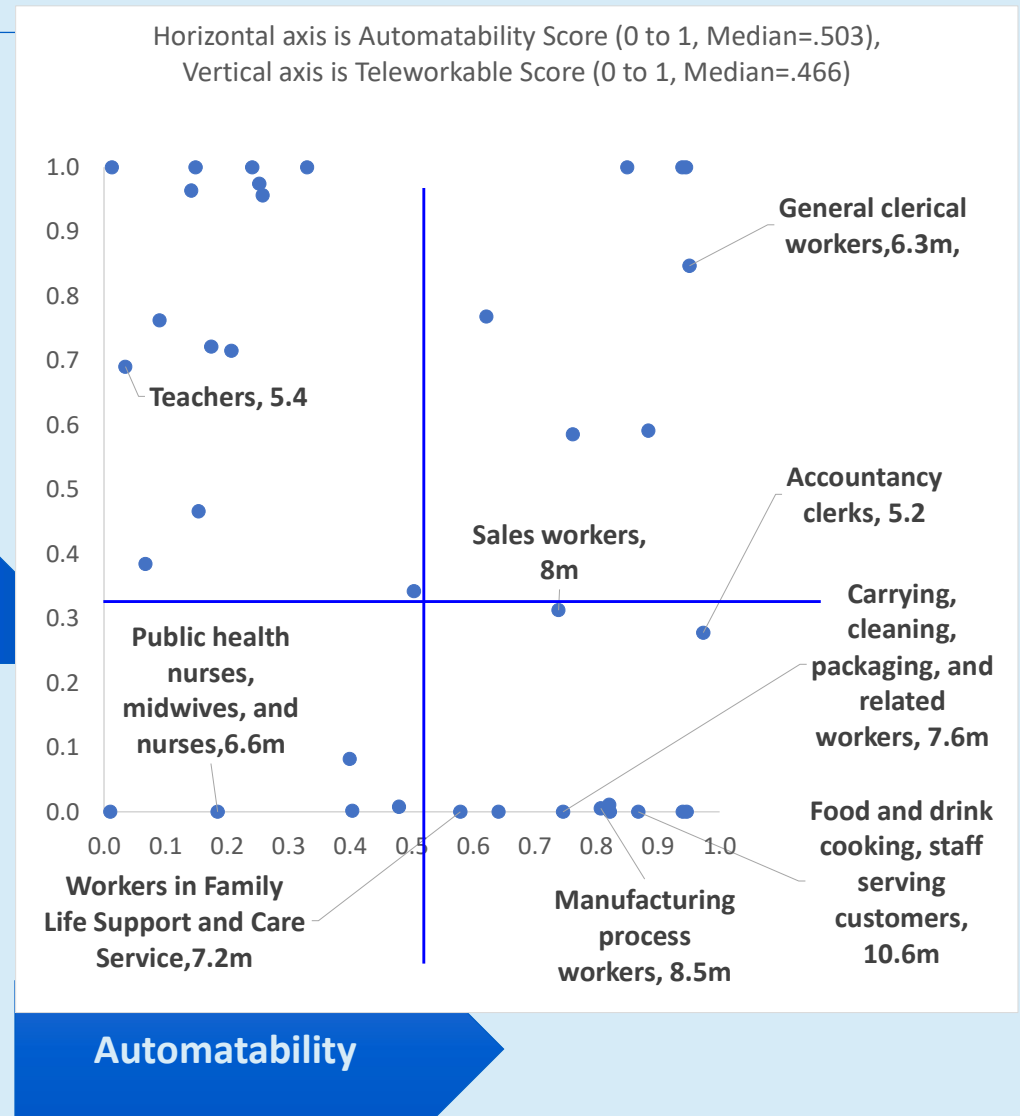
Thanks for your attention!

‘globotics quadrant’

*Susceptibility by occupation*

x-axis = automation

y-axis = globalisation



# Occupations by quadrant with number of jobs

NW quad	Million jobs	NE quad	Million jobs	SW quad	Million jobs	SE quad	Million jobs
Food and drink cooking, staff serving customers	10.6	General clerical workers	6.4	Public health nurses, midwives, and nurses	6.6	Workers in religion	0.1
Manufacturing process workers	8.6	Management, finance and insurance professionals	1.6	Security workers	2.8	Authors, journalists, editors	0.2
Sales workers	7.9	Sales clerks	1.3	Medical Technology and Healthcare Professionals	1.8	Artists, designers, photographers, film operators	0.6
Carrying, cleaning, packaging, and related workers	7.6	Transport and post clerical workers	0.5	Occupational health and hygiene service workers	1.8	Architects, civil engineers and surveyor	0.6
Workers in Family Life Support and Care Service	7.2	Outdoor service workers	0.4	Professional social welfare workers	1.7	Legal Professionals	0.8
Accountancy clerks	5.2	Manager of residential facilities and buildings	0.4	Doctors, dentists, veterinarians, and pharmacists	0.9	Researchers	1.0
Transport and machine operation workers	3.8	Office appliance operators	0.2			Other specialist professionals	1.1
Construction and mining workers	3.4					Manufacturing engineers	1.4
Production-related clerical workers	1.1					Management and business consultants	1.4
Other service workers	1.0					Administrative and managerial workers	2.5
Agriculture, forestry and fishery workers	0.5					Data processing and communication engineers	4.6
Agriculture, forestry, and fishery engineers	0.0					Teachers	5.4
	57.0		10.7		15.6		19.8

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# Anchor Conjecture.

# Corollary of the old saying.



Work expands to fill the time you leave for it.

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#. Service production processes are very different than industrial processes.

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Standardize output.

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