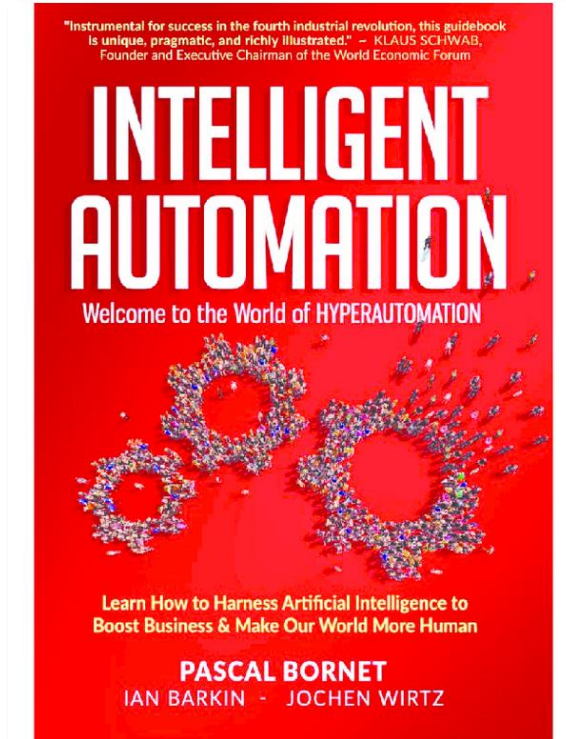


Welcome to the world of Intelligent Automation

Galit Fein, EVP & Senior Analyst @ STKI

Recommendation:





**Why
Intelligent
Automation**



It is a **concept – a convergence** of new technologies:

[AI] [ML] [DL] [RPA] [Bot] [IoT] [BMP]

It combines tech and methods to **execute business processes automatically** on behalf of knowledge workers

It **mimics knowledge workers'** capabilities (language, vision, execution, thinking, and learning) to perform their work activities

What is Intelligent Automation

The goal of using IA is to achieve a business outcome, through a **redesigned automated process**, with no or minimal human intervention

IA

- **increases** process speed,
- **reduces** costs,
- **enhances** compliance and quality,
- **increases** process resilience,
- **optimizes** decision outcomes

Ultimately, **IA improves customer and employee satisfaction** and boosts revenues





Definitions

AI

A combination of technologies able to reproduce human behavior and intelligence.

It includes the capacity to sense the environment, analyze it, and act on it.

Machine Learning

A subfield of AI. It enables computers to learn and improve on their own, from experience, without being explicitly programmed. ML has become the most used tech in IA

Deep Learning

A subfield of ML. DL enables ML to process complex data, that involves a large number of features and highly complex patterns, typically unstructured, such as pictures, movies, language

Digital Workforce

When using digital robots and programs to automate processes, companies create a digital workforce. As IA automates more and more processes, the size of the digital workforce grows

RPAs and Bots

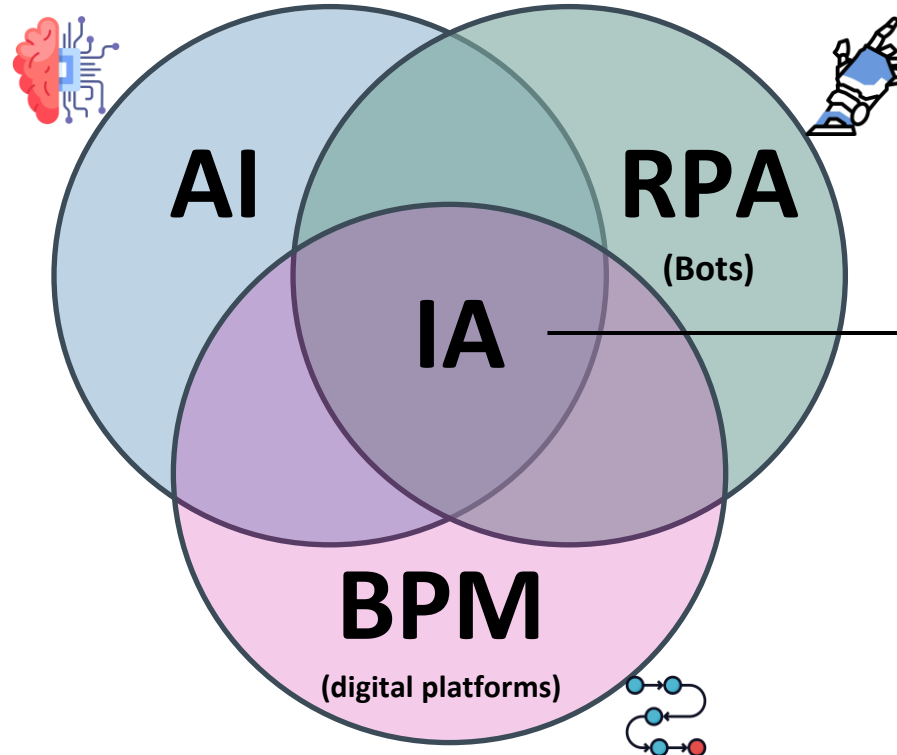
Software robots. A program in charge of automating a specific work, task, or process.

RPAs or chatbots

Automation

The action of SW program, which performs tasks, performed by human workers. By IA, which is all about knowledge work automation, we refer to SW-based automation

$$\text{IA} = \text{AI} + \text{RPA} + \text{BPM}$$



A **convergence** of these technologies can make a real revolution in the world of WORK

Industrial Revolution:

Automation of “blue-collar” workers



It provided massive changes in our society, such as an increase in standards of living and solving the problem of food shortage
It relieved people from laborious manual work

Algorithms for
“white-collar” workers
are the same
as tractors for farmers

Automation in agriculture
increased its productivity
(the workforce declined
from **44%** in the 90s to
28% in 2017)



72% worried
about robots and
computers being
able to perform
human jobs

85% dissatisfied
with their jobs (too
tedious and
repetitive)

Countries are
facing growing
debts and later
retirement ages

The cost of human error
and fraud is equivalent
to the money allocated
globally to education

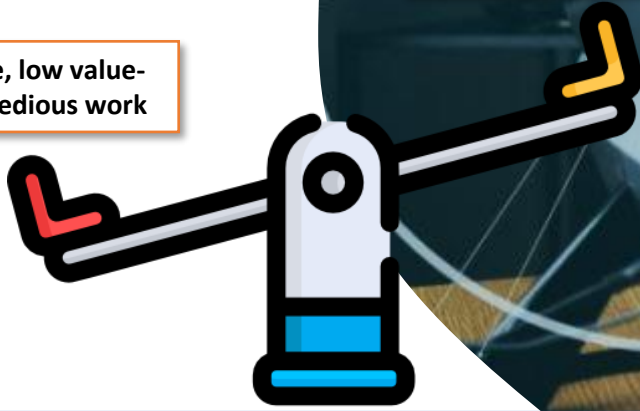
Automation requires
adaptation and
workforce
retraining—yet the
result is a
net gain in jobs

**The largest increases in productivity don't come from replacing humans
with machines, but rather from augmenting humans with machines ***

Intelligent Automation: Automation of “white-collar” workers

augmented workers with
superhuman capabilities

repetitive, low value-
add and tedious work



IA creates a SW-based digital workforce that enables synergies
by working hand-in-hand with the human workforce



From Task-driven Automation

- Isolated technology (RPA v1) that provides solutions for specific tasks
- “Simple”, rule-based automation, that helps resolve issues faster, reduce routine, and repetitive tasks



To Context-driven Automation

- Converged technologies with substantial synergies
- Automation that understands the context. It goes beyond passive observations and not only responds to events but also analyzes and interprets the context to deliver precise and proactive actions



The IA market size is expected to reach **\$15.8 billion** by 2025, with **12.5%** market growth from 2020 to 2025

86% of global business leaders believe that their orgs must deploy IA in the next **5** years to stay ahead

42% of CEO have already begun the process of digital transformation

56% reported gains after implementing IA. Gartner

IA already has an adoption rate of over **50%**. Expected to increase to more than **70%** in the next **2** years. Deloitte

82% of Israeli market already implemented RPA. STKI
IBM, Microsoft, SAP, are completing their portfolios **by acquiring RPA** SW providers



Rapid Changes in the Business Environment are making it more difficult for orgs to stay relevant and competitive

1. The highest profit per employee of the largest 500 Fortune companies

Ranking	Company name	Profit (million USD)	Number of employees	Profit per employee (USD)
1	Facebook	\$18,485	44,942	\$411,308
2	Apple	\$55,256	137,000	\$403,328
3	Alphabet (Google)	\$34,343	118,899	\$288,842
4	Microsoft	\$39,240	144,000	\$272,500
5	AbbVie	\$7,882	30,000	\$262,733

Source: adapted from Tipalti

Modern organizations require less and less employees;
they are more and more automated,
and they are less labor-intensive than older companies

the winners will be those who do so the
quickest and greatest extent
not only by digitalizing the existing business,
but by creating a completely **new business model**,
which was not possible before



IA in Employee Experience



Work activities considered tedious *

Average percentage of time spent by employees	% Time Current
Individual thinking, research, admin time	42%
* Administrative tasks	16%
Productive thinking time	10%
Productive time doing work – non-routine	8%
* Productive time doing work – routine	8%
Collaboration – internal & external	49%
* Unproductive messages – reading / writing	14%
* Unproductive meetings	12%
Productive collaboration (e.g. meetings, workshops)	9%
Productive emails	9%
Socializing	5%
Others / non-work / social media / interruptions	9%
Total	100%

Automate, Augment and Abandon is a useful framework to help orgs build their action plans to boost their EX, by moving it towards its ideal state,

IA is a key enabler to all of them

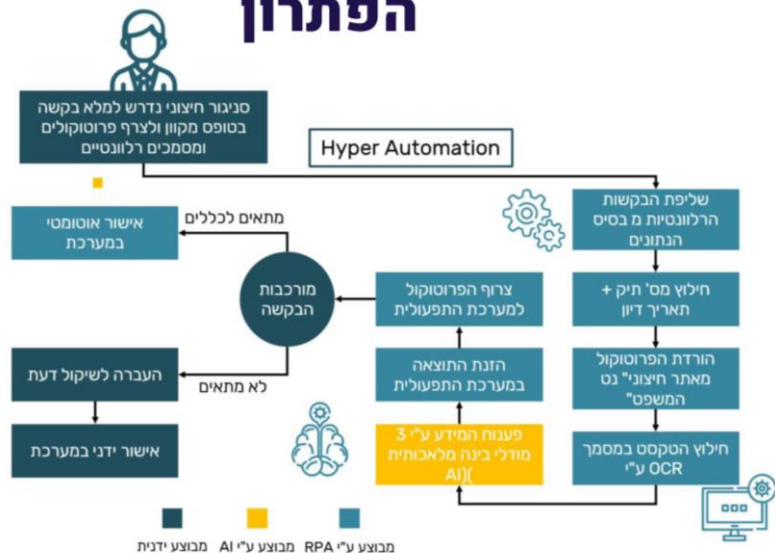
Source: Bornet, Pascal; Barkin, Ian; Wirtz, Jochen. INTELLIGENT AUTOMATION



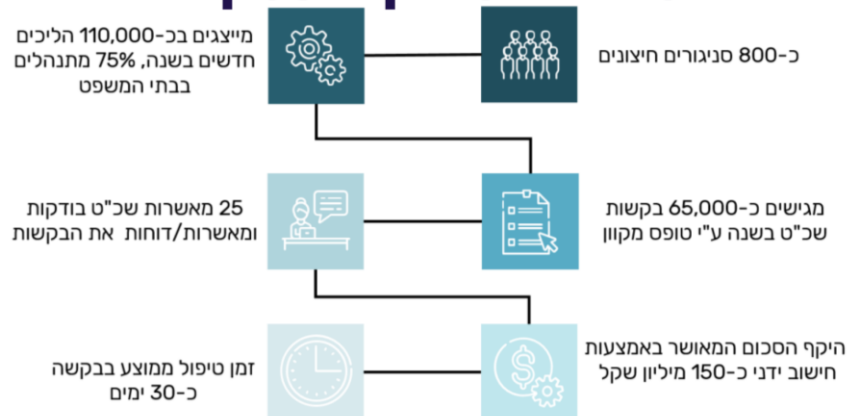
Hyperautomation במשרד המשפטים 2023

@ UIPath, HMS

הפתרון



תיאור התהליך העסקי



תועלות לארגון:

- ייעול השירות לאזרח - תשלום מהיר עבור עבודה שבוצעה
- **חסכון בשעות עבודה - חסכון של מעל 20,000 שעות עבודה בשנה**
- סטנדרטיזציה ארגונית וצמצום תלות בהכרעות ידניות
- צמצום טעויות אנוש - טעויות הקלדה
- **שביעות רצון גבוהה בצד האזרחים והעובדים**

IA in Customer Experience



Customer Service Automation - typically faster, cheaper, more seamless, and easier because it is accessible everywhere and user-friendly

“ How likely is it that you would recommend this brand to a friend?” (NPS up to 100)

Starbucks (77)
Airbnb (74)
Apple (63)
Amazon (62)
Zoom, Tesla
Metro Bank

Exceptional CX:

- Responsiveness and Omnichannel (chatbots, **self-service 24x7**)
- **30-50%** of customer interactions - are **closed** live without the involvement of a human representative

Poor service can cause up to 66% of consumers to stop doing business with one brand and switch to another.

SuperOffice. PRODUCTS INDUSTRY CONSULTING PRICING CUSTOMERS INSPIRATION ABOUT

CUSTOMER SERVICE

STUDY: 62% OF COMPANIES IGNORE CUSTOMER SERVICE EMAILS

Last updated: 16 March, 2023

<https://www.superoffice.com/blog/customer-service-benchmark-report/>



אני רוצה להאריך ביטוח חו"ל שלי

11:33 ✓

על מנת שנוכל לבחון אופצייה להארכת הפוליסה אנא השב/י על השאלות הבאות:

1. באיזו מדינה הנך שוהה כעת?
2. האם היה שינוי במצבך הבריאותי מאז יציאתך מישראל?
3. האם יש כוונה לתביעות עבור הביטוח?
4. מהו תאריך החזרה הסופי לארץ?
5. מתי המדינות בהן בכוונתך לשהות עד לשובר לארץ?
6. האם יש כרטיס טיסה חזור?

11:34

1. רומניה
2. לא
3. לא
4. 21.10
5. רומניה
6. לא

11:37 ✓

ההארכה בוצעה בהצלחה, מיד יישלח אליך אימייל עם הקבלה ודף פרטי ביטוח מעודכן

המשבר טיול מהנה! 🤖

11:50

נשמח לשמוע כמה מילים על השירות שקיבלת

14:51

שירות מדהים! איזו חוויה מרעננת. אחרי טיסה לילה קשה, בתקופה הקשה הזאת, המזוודה עם המון דברים חשובים לא הגיעה, סימסתי ב8 בבוקר [REDACTED], הלכתי לישון כשקמתי אחרי כמה שעות- הכסף כבר היה בכרטיס. בלי עצבים, סרטור. כמה נוח. המון תודה. נוסעת רק אתכם ואמליץ עליכם תמיד

15:30 ✓

תודה לך על המשוב
15:30 ✓

שלום, המזוודה שלי לא הגיעה. אשמח לעזרה

9:46 ✓

זוהתה פוליסה

9:46

אני הכנס תעודת זהות

9:46

נחתת בחו"ל והמזוודה לא הגיעה? קיבלת אישור מחברת התעופה?
אל דאגה, מיד תוכל לעבור לנציג אנושי אשר יסייע לך בהטענת הכרטיס.

הנר מועבר לנציג שירות אנושי 🙋

9:46

אל דאגה, קיבלתי את פנייתך, כמה רגעים ואני איתך.

9:49

תשלחי לי את המדבקה שקיבלת בנוגע לכבודה שלך, בד"כ מדביקים את זה על הדרכון
או על כרטיס הטיסה

9:49

מודה לך על ההמתנה 🙏

הטענתי את הכרטיס שלך ב- [REDACTED] תקרת הכיסוי בעבור עיכוב כבודה בפוליסה 🙄

מקווה שהכבודה שלך תגיע כמה שיותר מהר 🙏

* ניתן למשוך את הכסף במטבע המקומי במדינה בה את/ה נמצא
* כשנע לאחר השימוש בכרטיס, סכום היתרה מתאפס

12:37



STKI.INFC

graph or portion of graph

Avoiding millions of losses due to fraud and errors per year



Fraud

estimated at \$5 trillion globally

The amount of money lost to fraud
has **doubled** in the last 10 years



Human Errors

Medical errors in the US are estimated
at \$1 trillion

86% of those errors are administrative

IA

IA makes transaction processes more efficient - generates log files for every
action, creating transparency and ease of compliance
ML recognizes predictive patterns and trends

How IA automates knowledge workers?

By mimicking 4 main human capabilities:



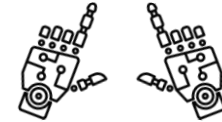
analyzing, creating insight, predicting,
making decisions, and adjusting



using language to read,
speak, write, and interact



viewing the environment,
recognizing objects and signs



typing, clicking, filling in
forms, and authenticating

Source: © Bornet, Barkin & Wirtz



IA tech explained

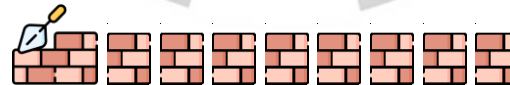


Big Data mng
Machine Learning
Data Visualization

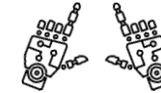


Intelligent chatbots
Unstructured information mng
Sentiment Analysis
Speech Analytics

**Foundation to the successful
implementation of IA**



Optical Character Recognition (OCR)
Intelligent Character Recognition (ICR)
Image and video analysis
Biometrics



Low-code and smart workflow
platforms
Robotic Process Automation (RPA)

Top Management Support, Enterprise-level Vision, Governance, Automation Center of Excellence,
Process Redesign, Vendor and Partner Selection, DATA mng, Change mng, Talent mng

Source: © Bornet, Barkin & Wirtz



**Sustain the
Change**

Scale up

- The successful implementation of IA is **not easy**, nor guaranteed
- Success is easy when implementing IA within limited scopes, through PoC or **pilots**
- **Scaling up** the initiative across an org is the most complex step, together with change sustainability

**Lack of Management
vision & support**

**Technical
Limitations**

What Fails

**Lack of Process
Understanding**

Data

**Costs and
Efficiency**

Talent

**Complexity of the
Transformations**

**Change
Management**



How to Succeed in IA

"The tone comes from the top"



Top management support



Clear governance



Center of Excellence establishment



Enterprise-level vision



Business process understanding & redesign



Talent. Internal recruitment and retraining

"Think big, start small, scale fast"



**Change Management
Educate and clarify**

"IA is a business transformation, not a tech project"



Recommended IA Implementation Roadmap

~3-4 weeks

~4-6 weeks

~8-10 months

Project Preparation

Automation of **end-to-end processes first**

- **Management Vision**
- Governance
- Automation Assessment
- High-Level Roadmap

Project Launch

- Identification & prioritization
- Detailed roadmap
- Anticipation of IT requirement
- Vendor & partner selection
- Pilot

- **Automation CoE as soon as possible**
- Agile methodology for the deployment sprints
- Continues data mng

Project Scaling

Process redesign

Deployment sprints

Production

End-to-end process 2

End-to-end process 3

Change & Talent mng

© Bornet, Barkin & Wirtz



The Importance of End-to-end Process Automation

When the washing machine and dryer are done and it's your turn



More than **50%** of the potential transformation value comes from the top **10-20** end-to-end processes

Source: McKinsey

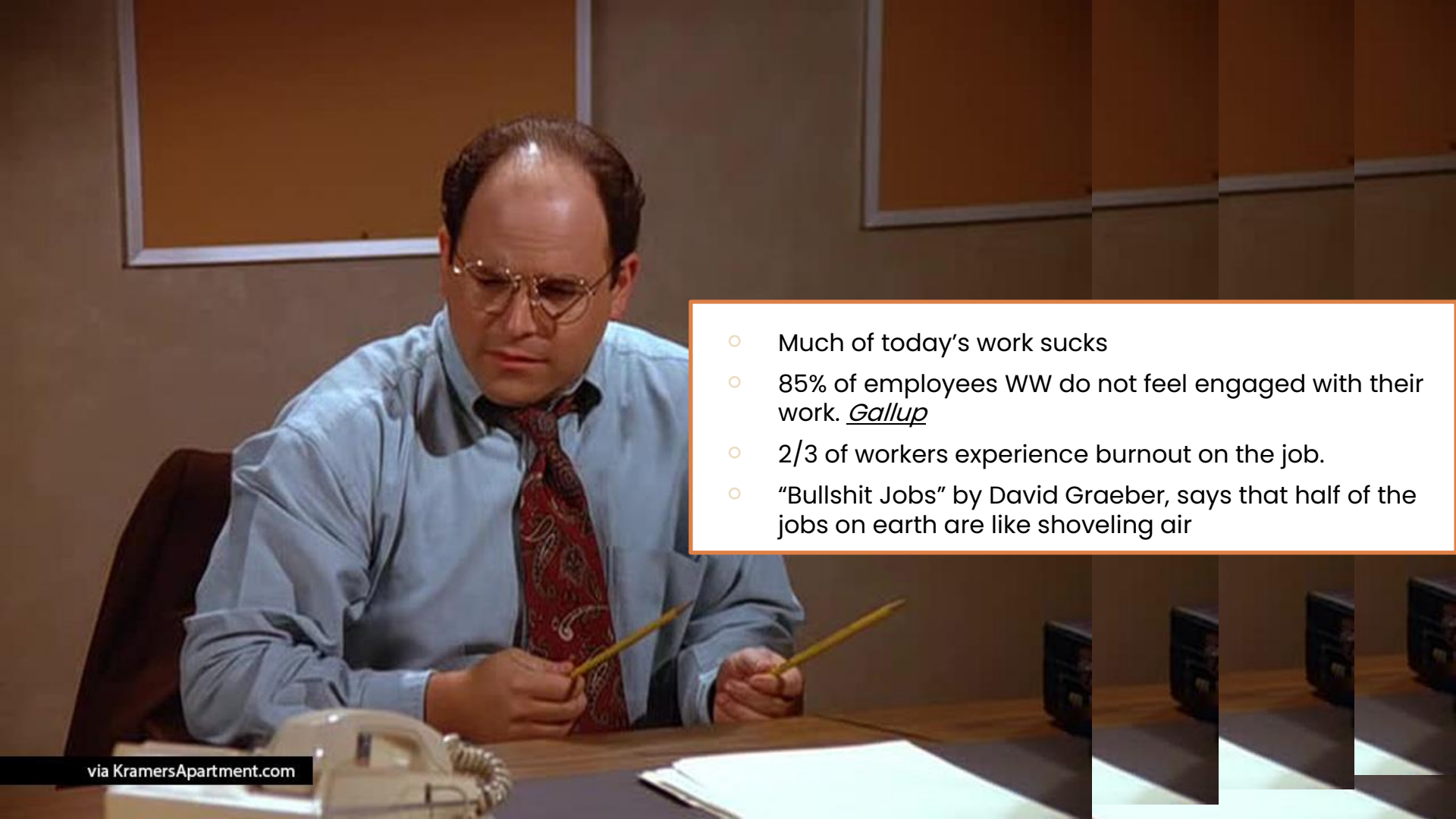
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Rethinking "WORK"

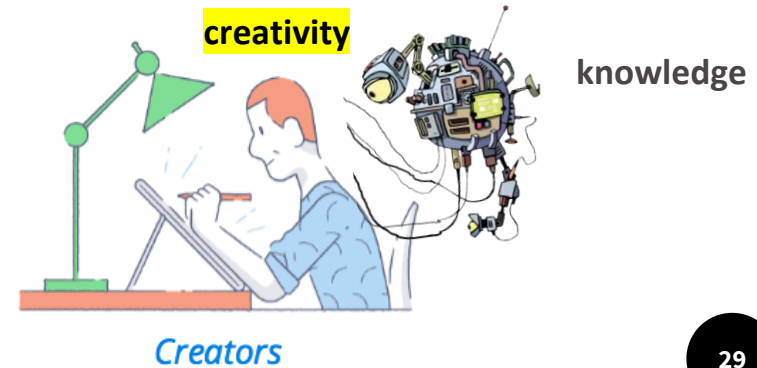
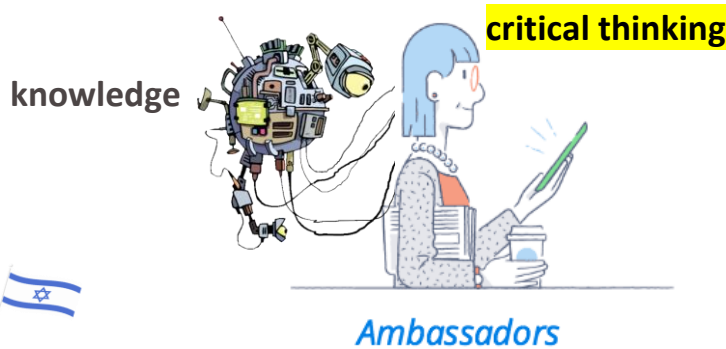
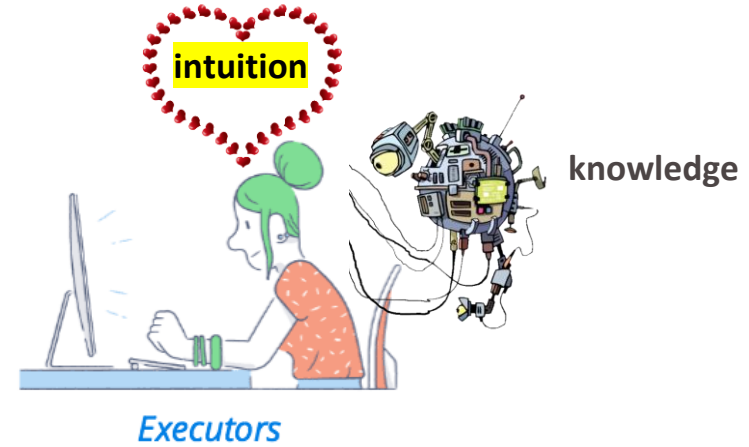
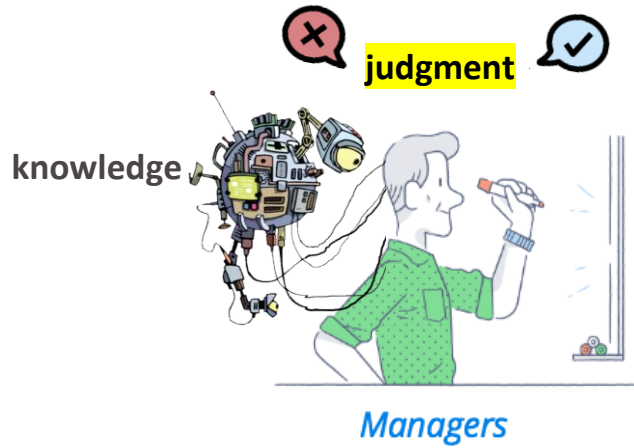


The largest increases in productivity don't come from replacing humans with machines, but rather from augmenting humans with machines



- Much of today's work sucks
- 85% of employees WW do not feel engaged with their work. Gallup
- 2/3 of workers experience burnout on the job.
- "Bullshit Jobs" by David Graeber, says that half of the jobs on earth are like shoveling air

From “knowledge workers” to “insight workers”



Cooperation between Human Experts and IA



**AI-generated art piece takes
the first at the state fair**

Ora Reuven, Israeli artist:

*"There is a process of co-creation that goes back and forth,
sometimes it feels like I "steal" my ideas from AI"*



Kai is an empathic AI for optimized therapy and coaching

Alex Frenkel, CEO & Co-Founder, Kai:

*"Kai incorporating the expert knowledge base of a specific
professional"*

**Our national strength has always been
our entrepreneurship, innovation, and creativity**

**I believe that these capabilities combined with
Intelligent Automation will be an essential part of our
national recovery**

Thank you!

Parts of this presentation were written by human



Galit Fein
EVP & Senior Analyst @ STKI

1 Era of Convergence

9:45–10:30 Dr. Jimmy Schwarzkopf

2 Intelligent Automation

10:30–11:00 Galit Fein



Coffee Break



11:00–11:30 Break

3 GenAI's impact on D&A

11:30–12:10 Einat Shimoni

4 Architecture, Infrastructure & Operations for AI

12:10–12:50 Pini Cohen & Einat Shimoni

5 AI's impact on Dev, Infra, Cyber

12:50–13:20 Pini Cohen



Lunch

13:20–14:20 Break

6 Organization 2024

14:20–15:00 Galit Fein

7 AI-powered Knowledge Worker

15:00–15:30 Einat Shimoni

