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AI IMPACT 2024
40th Annual FPC Seminar + Expo
Sept 29 - Oct 1, 2024

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THE ROBOTS ARE COMING

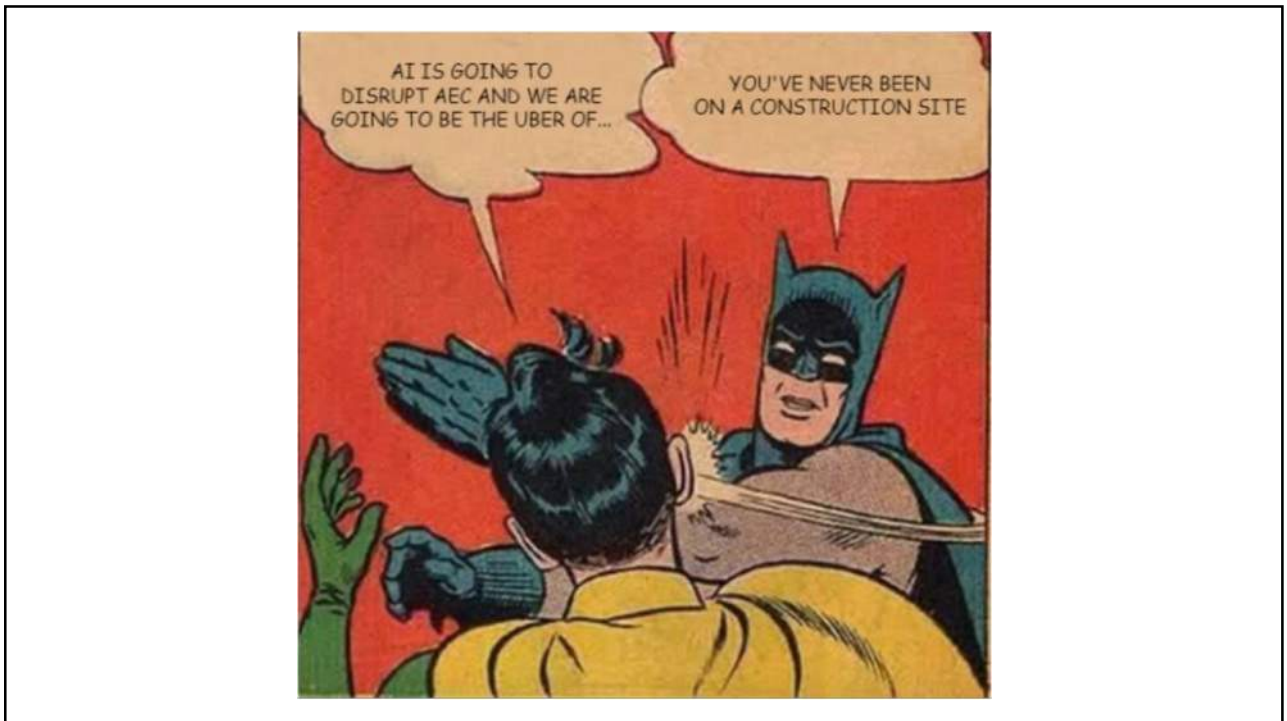
Course Number: AHCA 2024.02

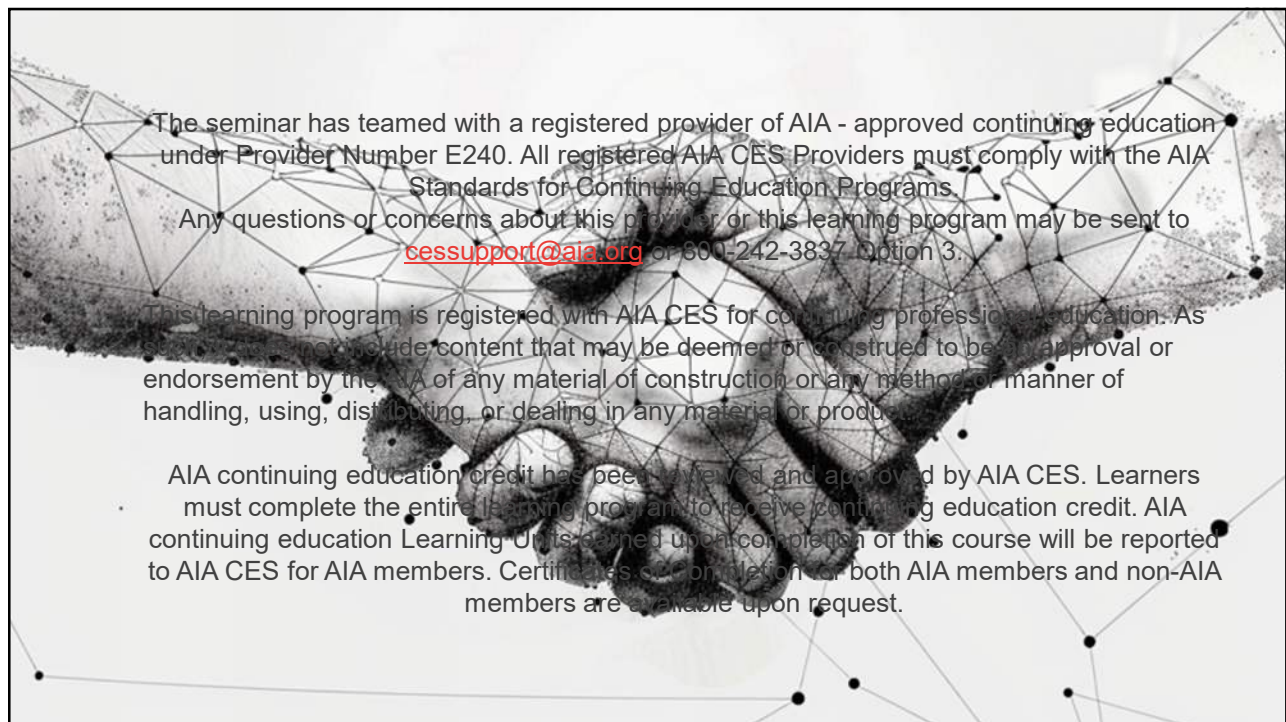
Credit Designation: 1 LU/HSW

AIA CES Provider Number: E240

September 29, 2024





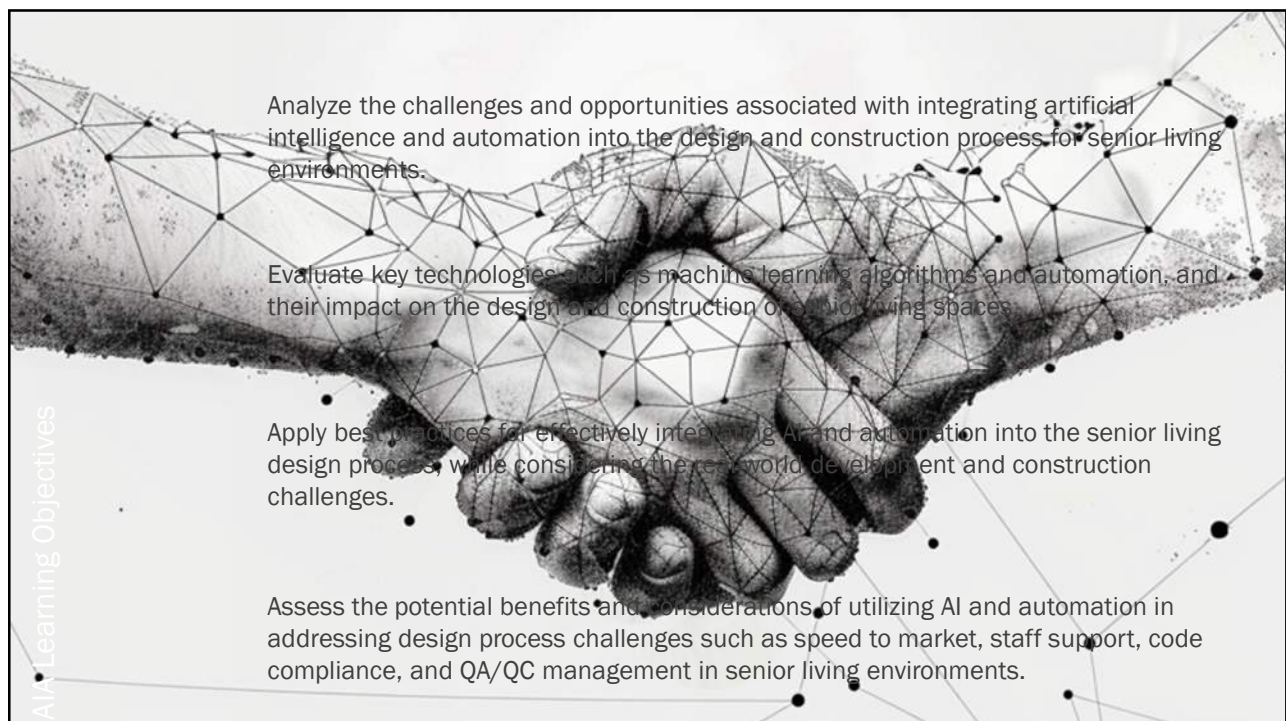


The seminar has teamed with a registered provider of AIA - approved continuing education under Provider Number E240. All registered AIA CES Providers must comply with the AIA Standards for Continuing Education Programs.

Any questions or concerns about this provider or this learning program may be sent to cessupport@aia.org or 800-242-3837 Option 3.

This learning program is registered with AIA CES for continuing professional education. As a condition of participation, this program may include content that may be deemed or construed to be an approval or endorsement by the AIA of any material or construction or any method or manner of handling, using, distributing, or dealing in any material or product.

AIA continuing education credit has been received and approved by AIA CES. Learners must complete the entire learning program to receive continuing education credit. AIA continuing education Learning Units earned upon completion of this course will be reported to AIA CES for AIA members. Certificates of completion for both AIA members and non-AIA members are available upon request.



AIA Learning Objectives

- Analyze the challenges and opportunities associated with integrating artificial intelligence and automation into the design and construction process for senior living environments.
- Evaluate key technologies such as machine learning algorithms and automation, and their impact on the design and construction of senior living spaces.
- Apply best practices for effectively integrating AI and automation into the senior living design process, while considering the real-world development and construction challenges.
- Assess the potential benefits and considerations of utilizing AI and automation in addressing design process challenges such as speed to market, staff support, code compliance, and QA/QC management in senior living environments.

SPEAKERS



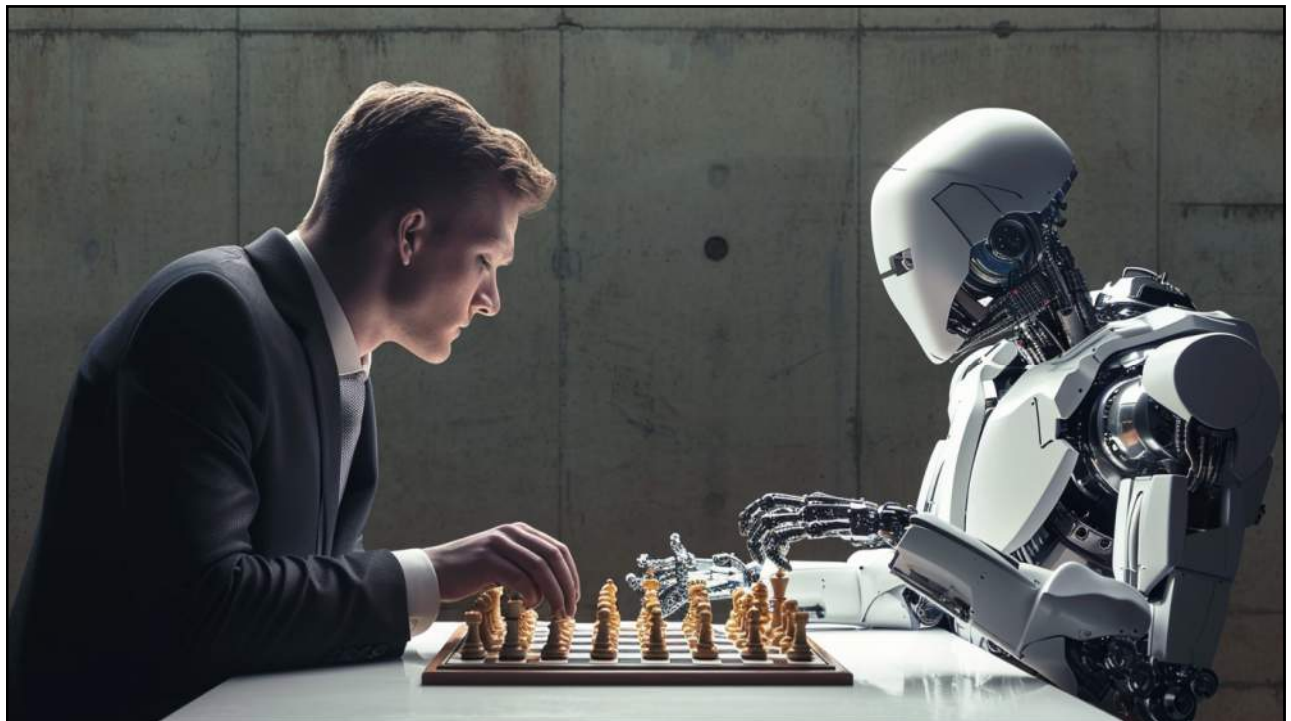
Jay Weingarten
Partner



Joshua Marriott
Director of VDC & Field Solutions



Andre Teleguz
Principal



ARTIFICIAL INTELLIGENCE

AI was born in mid 1950's at Carnegie Mellon and MIT

I = Intelligence

Recognition – Think Fast

Identification and classification of objects

Cognition – Think Slow

Planning, problem solving, abstraction

Artificial Narrow Intelligence

Mine expert knowledge from people

Build a program to do a specific thing

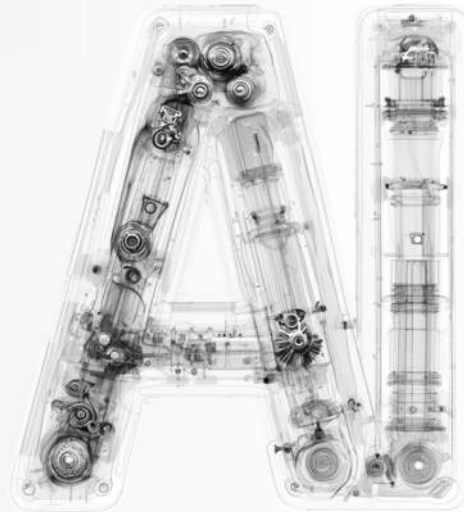
This is where a lot of AI is today

Artificial General Intelligence

People tend to have narrow intelligence (subject matter experts)

We don't think generally very much (Genius, Jeopardy)

AGI - Doesn't work well



ETHICAL & SECURITY CONSIDERATIONS

- What is public vs. non-public?
- Legal right you may be giving away...
- Who owns the intellectual property?
- Are there harmful biases, misrepresentation, or generalization?
- What questions aren't being asked?
- Environmental considerations?
- Where is information coming from?

How do you know
that you know
what you know?



AI-GENERATED IMAGE



IMPLEMENT AI POLICY

Artificial Intelligence Policy

SCOPOS Hospitality Group Employee Handbook

Using AI at work:

Please see our list of approved AI tools. Please get explicit review and approval by an IT team or designated staff for the use of a new tool. This person will check for data privacy concerns in the terms.

What data to share with ChatGPT:

While ChatGPT (chat.openai.com) grants OpenAI the rights to the inputs and outputs of the tool, SCOPOS Hospitality Group has opted out to prevent the exchange of this information. However, employees must still exercise caution when using ChatGPT and refrain from inputting proprietary or sensitive company data. As a rule of thumb, if the information wouldn't be shared anonymously on Reddit, it should not be inputted into ChatGPT. It is important to note that using a company-issued account can help mitigate risks, but care should still be taken to avoid any potential data privacy concerns.

Using ChatGPT for work outputs:

You are free to use ChatGPT or another AI tool to help with your process or internal work, but any output generated by ChatGPT must be reviewed and approved by a supervisor or designated staff member before being used in official company communication or released externally.

Security measures:

Employees must always use a secure and trusted internet connection when accessing ChatGPT or any other AI tool. This helps protect against data breaches and ensures data privacy. Employees must keep their login credentials for ChatGPT secure and not share them with anyone else. This also includes creating strong passwords and changing them regularly. Employees should regularly review and delete any unnecessary input or output data stored in ChatGPT or other AI tools.

Reporting concerns:

If any employee has any concerns about the use of ChatGPT or any other AI tool, they must report it to their supervisor or designated staff member immediately. This helps ensure that any potential security risks or data privacy concerns are

disciplinary action, up to and including termination of employment. It is the responsibility of all employees to adhere to these guidelines in order to maintain data privacy and prevent any potential

Employees must also be aware that the use of AI tools like ChatGPT may be subject to various laws that vary from region to region, so it is important that employees are aware of and comply with applicable laws. By adhering to these guidelines and being mindful of data privacy, employees can ensure the possible and secure use of AI tools like ChatGPT within SCOPOS Hospitality Group.



Home

Design

Managing Risk

MarComm

Office

People

Projects

Technology



Home > Technology > Innovative Technology > Artificial Intelligence at RDG > Introduction

Introduction

Our purpose behind Artificial Intelligence use at RDG:

Automate the mundane so we can focus on the creative.

Artificial Intelligence (AI) represents the cutting-edge of technology, enabling machines to learn from experience, adjust to new inputs and perform human-like tasks. In our industry, AI can streamline processes, enhance decision-making, and unlock innovative solutions, making it indispensable for staying competitive and driving growth.

Understanding Different Types of AI

Artificial Intelligence at RDG

Introduction

Best Practices for AI Usage

AI Tools & Technologies

TEN USE CASES OF AI IN ARCHITECTURE

1. Streamlining early-stage design
2. Improve architectural mapping.
3. Optimizing Sketching
4. Streamlining Compliance
5. Improving Urban Planning
6. Optimizing building energy mgmt.
7. Improving construction safety
8. Enabling parametric architecture
9. Automating documentation
10. Revealing safety hazards.



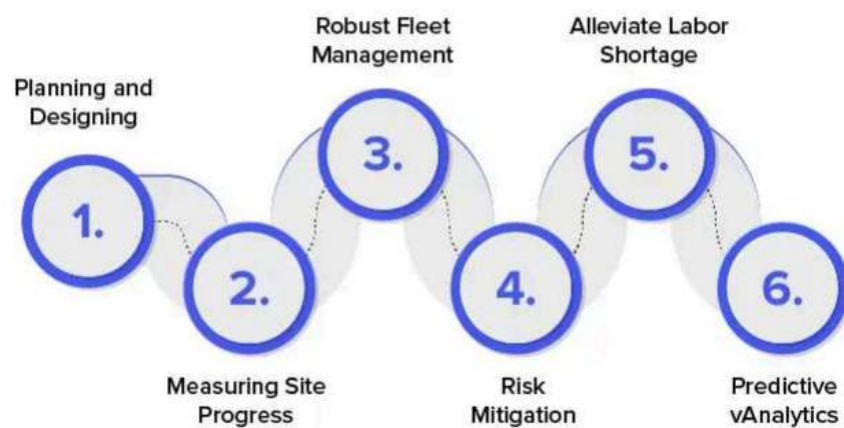








AI Use Cases in Construction



AI – Developing Uses

- Location Based Data Mining and Analysis
 - Labor Rates
 - Material Rates
 - Age and Income Demographics
 - Competition and what they offer
 - Occupancy Rates
 - Local Code Requirements

NIC MAP
Data Services

NIC MAP® Construction Monitor
2020 H1 Primary and Secondary (https://portal.nicmap.com)

CERC Construction Summary by Market (March - Louisiana)

Region	Investment			Construction			Total Starts
	Projects	Units	Value (\$B)	Projects	Units	Value (\$B)	
Atlanta, GA	3	1,268	4.7%	0	0	0.0%	0
Baltimore, MD	1	1,274	4.1%	0	0	0.0%	0
Birmingham, AL	3	314	2.3%	0	0	0.0%	0
Charlotte, NC	0	0	0.0%	0	0	0.0%	0
Chicago, IL	0	0	0.0%	0	0	0.0%	0
Columbus, OH	0	0	0.0%	0	0	0.0%	0
Dallas, TX	0	0	0.0%	0	0	0.0%	0
Denver, CO	0	0	0.0%	0	0	0.0%	0
Detroit, MI	0	0	0.0%	0	0	0.0%	0
Houston, TX	0	0	0.0%	0	0	0.0%	0
Los Angeles, CA	0	0	0.0%	0	0	0.0%	0
Minneapolis, MN	0	0	0.0%	0	0	0.0%	0
New York, NY	0	0	0.0%	0	0	0.0%	0
Phoenix, AZ	0	0	0.0%	0	0	0.0%	0
Portland, ME	0	0	0.0%	0	0	0.0%	0
San Francisco, CA	0	0	0.0%	0	0	0.0%	0
Seattle, WA	0	0	0.0%	0	0	0.0%	0
St. Louis, MO	0	0	0.0%	0	0	0.0%	0
Tampa, FL	0	0	0.0%	0	0	0.0%	0
Wash. DC	0	0	0.0%	0	0	0.0%	0
West. Mich.	0	0	0.0%	0	0	0.0%	0
Wichita, KS	0	0	0.0%	0	0	0.0%	0
Winnipeg, MB	0	0	0.0%	0	0	0.0%	0
Worcester, MA	0	0	0.0%	0	0	0.0%	0
Yokohama, Japan	0	0	0.0%	0	0	0.0%	0
Grand Total	7	2,856	2.3%	0	0	0.0%	0

Annual Weighted Average Wages per FTE by Department

Department	Wage (\$/hr)
Construction	\$15.00
Maintenance	\$12.00
Security	\$10.00
Housekeeping	\$8.00
Food Service	\$6.00
Other	\$4.00

Weighted Average Daily Raw Food Costs per Resident Day by Region

Region	Food (\$/day)	Alcohol (\$/day)	Other (\$/day)	Total (\$/day)
Atlanta, GA	\$0.15	\$0.05	\$0.05	\$0.25
Baltimore, MD	\$0.18	\$0.08	\$0.08	\$0.34
Birmingham, AL	\$0.12	\$0.04	\$0.04	\$0.20
Charlotte, NC	\$0.16	\$0.06	\$0.06	\$0.28
Chicago, IL	\$0.14	\$0.05	\$0.05	\$0.24
Columbus, OH	\$0.17	\$0.07	\$0.07	\$0.31
Dallas, TX	\$0.13	\$0.04	\$0.04	\$0.21
Denver, CO	\$0.19	\$0.09	\$0.09	\$0.37
Detroit, MI	\$0.11	\$0.03	\$0.03	\$0.17
Houston, TX	\$0.16	\$0.06	\$0.06	\$0.28
Los Angeles, CA	\$0.20	\$0.10	\$0.10	\$0.40
Minneapolis, MN	\$0.14	\$0.05	\$0.05	\$0.24
New York, NY	\$0.22	\$0.12	\$0.12	\$0.46
Phoenix, AZ	\$0.10	\$0.03	\$0.03	\$0.16
Portland, ME	\$0.17	\$0.07	\$0.07	\$0.31
San Francisco, CA	\$0.25	\$0.15	\$0.15	\$0.55
Seattle, WA	\$0.18	\$0.08	\$0.08	\$0.34
St. Louis, MO	\$0.15	\$0.05	\$0.05	\$0.25
Tampa, FL	\$0.12	\$0.04	\$0.04	\$0.20
Wash. DC	\$0.16	\$0.06	\$0.06	\$0.28
West. Mich.	\$0.11	\$0.03	\$0.03	\$0.17
Wichita, KS	\$0.13	\$0.04	\$0.04	\$0.21
Winnipeg, MB	\$0.14	\$0.05	\$0.05	\$0.24
Worcester, MA	\$0.10	\$0.03	\$0.03	\$0.16
Yokohama, Japan	\$0.15	\$0.05	\$0.05	\$0.25
Grand Total	\$0.16	\$0.06	\$0.06	\$0.28

Utilities Cost by Community Type

Community Type	Utilities (\$/month)
Independent Living	\$1.00
Assisted Living	\$1.50
Nursing Home	\$2.00
Memory Care	\$2.50
Other	\$1.25
Grand Total	\$1.65

AI – Develop Program & Assign Space for each room

Administrative

Administrative Reception
Executive Offices
Clerical Areas
Workroom and Associated Storage
Accounting Offices
Secretarial Offices
Conference Rooms
Human Resources
Administrative Restrooms

Circulation

Stairs and Elevators
Lobby
Concierge Desk
Entry Lounge
Corridors
Open, Unassigned Space

Marketing

Sales Offices
Closing Room
Sales Reception Area
Coat Room
Display Area

Activity Space

Living Rooms
Arts & Crafts
Assembly
Card Room
Cinema
Television
Chapel
Convenience Store
Beauty/Barber
Resident Kitchen
Activity Rooms
Billiards
Business Center/ Computer Room
Family Game and Activity Rooms
Library
Activity Equipment Storage
Director of Activities Office
Consultation Office
Chaplain's Office
Guest Bedroom
Bank
ATM
Mail/ Message
Woodworking

Support Services

General Storage
Housekeeping
Laundry
Men's and Women's Restrooms
Employee Locker Rooms
Employee Dining and Vending
Maintenance Shop
Dock, Compactor, Dumpster
Holding and Receiving
Janitor Closet
Mechanical Rooms
Electrical Rooms
Trash Rooms
Resident Storage
Communications Rooms

Dining Services

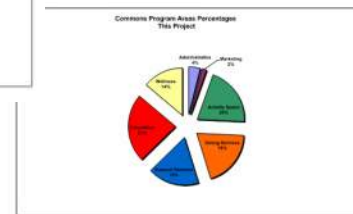
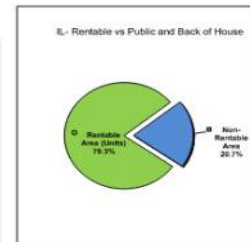
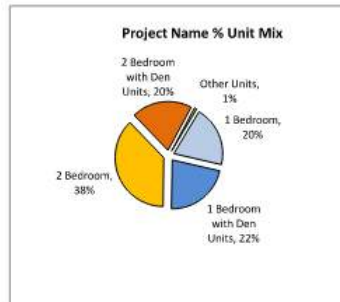
Kitchens
Café
Dining Room & Associated Storage
Cart Storage and Cleaning
Private Dining
Outside Dining Terrace
Service Bar
Lounge/ Bar
Kitchen Directors Office

Wellness

Wellness and Associated Restrooms
Locker Rooms
Pool & Associated Mechanical Rooms
Exercise & Aerobics
Message Therapy Rooms
Medication & Equipment Storage
Nurse Base, Lounge, Restrooms
Doctor's Offices/ Exam Rooms
Treatment Rooms

AI – Developing Uses

- AI could write the Program based on the market demand study
- Identify the appropriate units, unit mix, and unit size
- Calculates the circulation, dinning services , activity areas, wellness, support space etc.
- Creating various program models that fit the specific site constraints



AI – Developing Uses

Cost Modeling & More

- Generate a pro forma based current labor rates, market conditions, and competition
- Determine Building Cost
- Determinate Operation Cost
- Generate Marketing Material and distribute to potential buyers



AI and Robotics – What are we currently Doing?

Weitz utilizes Dusty Robotics Layout System

- Multi-trade layout printed directly on the slab or deck.
- Variable line types
- Data is coordinated

Benefits

- Faster than manual layout
- Extremely accurate
- Reduces Errors



AI and Robotics – What are we currently Doing?

Hilti Jaibot

- Layout based on digital files
- Robotically drills for anchors

Benefits

- 40% Faster than humans
- Removes dust as it performs the task
- More accurate



AI and Robotics – What are we currently Doing?

- 3D – Printing
 - Enables large scale printing of walls and façade
 - Reduces Material Waste
 - Expedites construction Timelines



AI and Robotics



Automated surveillance, monitoring, and data collection using Drones & Robots

- Aerial surveys without a pilot
- Predefined flight paths
- Captures images of construction progress
- Monitors QC of hard-to-reach areas
- Security - detects unauthorized access
- Detection of noise levels and air quality
- LiDAR Scanning and Mapping of the site
- Global Inspection Robot Market
 - 940M in 2020, estimate 14B in 2030



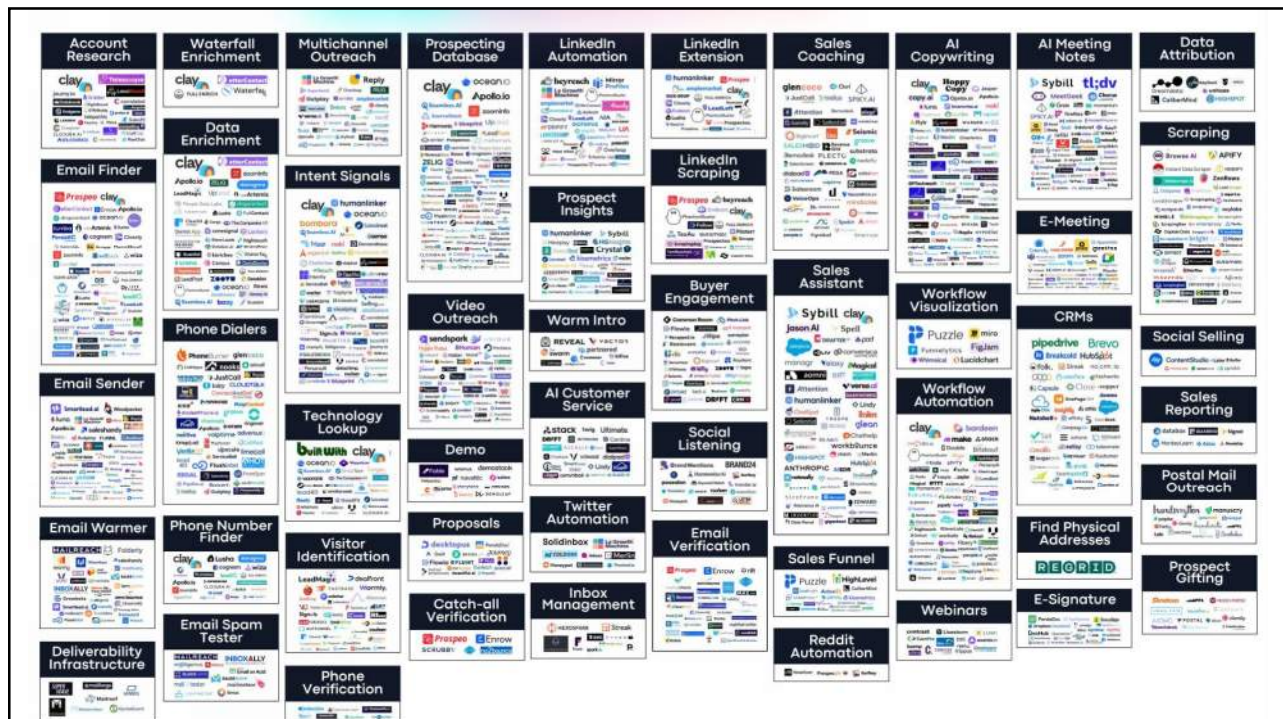
OUR AI JOURNEY WHERE WE STARTED.

SCOPOS hosted an AI Summit on April 14, 2023 to introduce and prepare for the integration of AI into the company.



"THE AI
REVOLUTION IS ON.
COMPANIES THAT
FAIL TO ADAPT
WILL BE LEFT
BEHIND."

VELOCITY

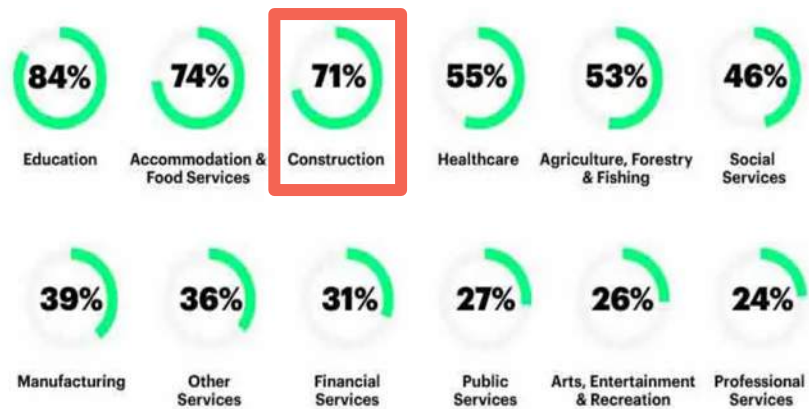


BILL GATES PREDICTS AI CAN LEAD TO A 3-DAY WORKWEEK.

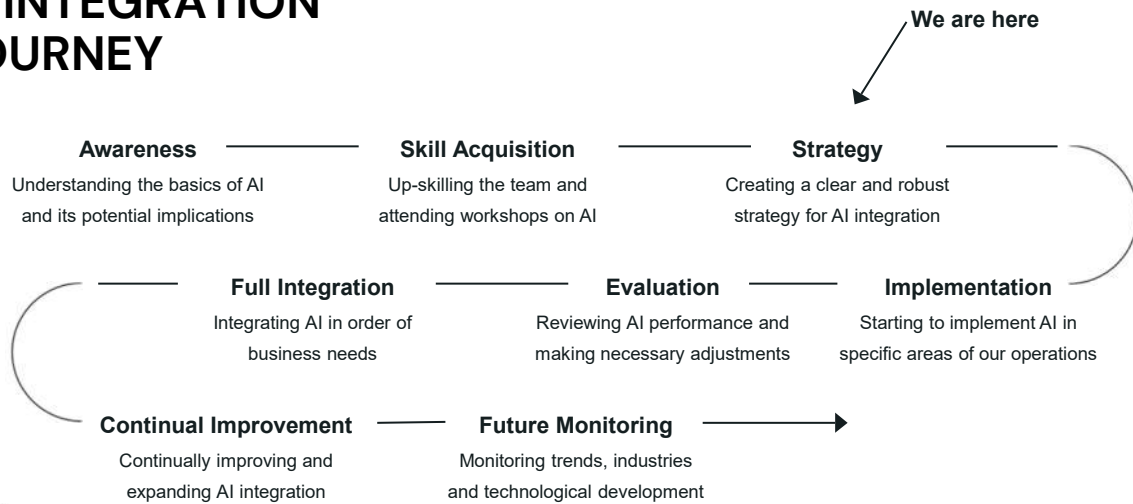
Microsoft founder Bill Gates predicts that AI could lead to a three-day workweek, with machines taking over the “drudge work.” Gates believes that if human labor is freed, it can be used for more meaningful activities, **such as helping the elderly** and reducing class sizes.c



71% PROFIT INCREASE BY LEVERAGING AI WITHIN THE NEXT DECADE.



AI INTEGRATION JOURNEY



AI INTEGRATION AT SCOPOS

“TESLA IS NOT A CAR MANUFACTURER TESLA IS AN AI COMPANY”

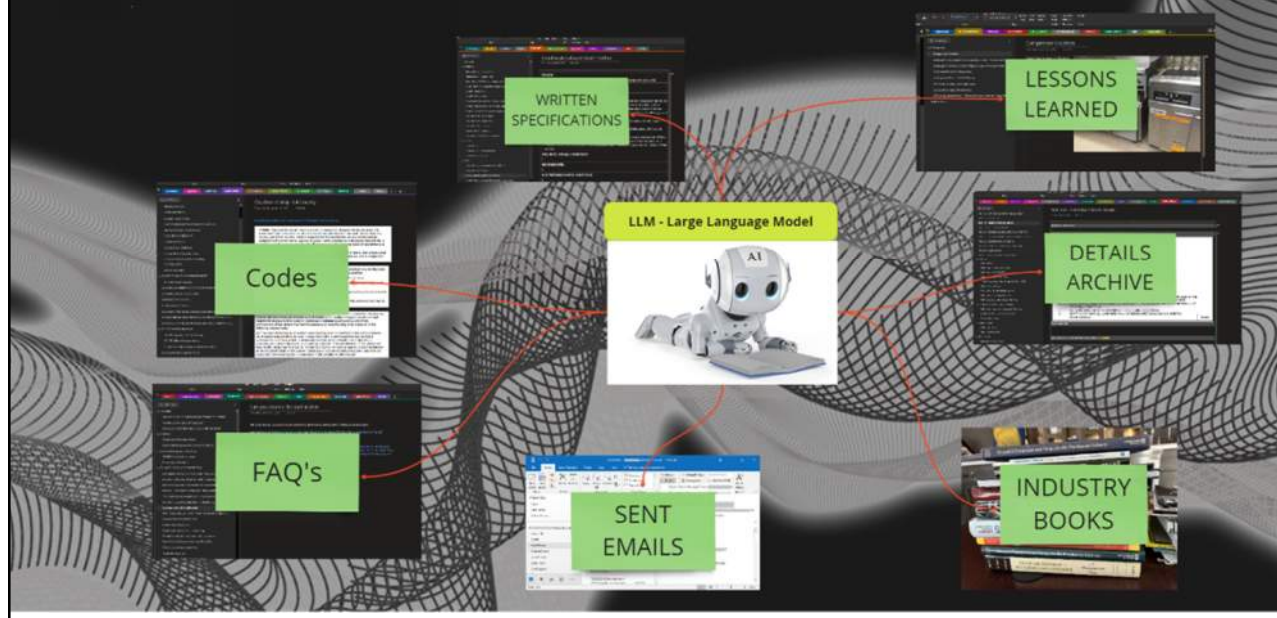


Data The New Gold Rush for Businesses





Knowledgebase Sources – Data Sets



Digitising the Data

The Path to AI...

Digitize on a Platform

Capture and organize data that will be valuable to you today and years from now.

Invest in Data

Invest in your data and in the people who work with it.

“40-60% of development of ai is used in wrangling and digitizing data, making it accessible”



AI BOTS

ICE CALCULATION PROMPT:

Please specify the type of restaurant you are designing the ice supply for (e.g., Restaurant, Hospital Cafeteria, School Cafeteria, Bar, Hotel).

ICE USAGE RATE:

- For Restaurants: On average, each customer uses 2 lbs. of ice per day. How many customers do you expect during regular operating hours?
- For Hospital Cafeterias: On average, each person uses 1 lb. of ice per day, and there are 10 lbs. needed for every bed. How many people do you serve in a day, and how many beds are there in the cafeteria area?
- For Schools and University Cafeterias: On average, each student uses 1.5 lbs. of ice per day. How many students are expected during regular operating hours?
- For Bars and Cocktail Lounges: On average, each seat requires 3 lbs. of ice. How many seats are there in the bar or lounge area?
- For Hotels: On average, each room requires 5 lbs. of ice per day. How many rooms are in the hotel?

PRODUCTION TIME:

- How many hours does the ice machine operate in a 24-hour period? (Typically, this is the same as the ice machine's production cycle.)

PEAK DEMAND:

- Do you experience any periods of high demand where you require additional ice during peak hours? If yes, please provide the estimated additional ice needed during those peak hours.

ICE STORAGE:

- How much ice storage capacity do you require? Please consider the frequency of ice usage and the size of ice bins needed.
- Based on your responses to these questions, we will calculate the recommended ice production and storage capacity for your specific restaurant type.

Knowledge Base Assistant

Ice Machine Sizing

I'm your Ice Machine sizing Calculator, ready to calculate the right size for you!

[Click Link](#)

Grease Trap Sizing

I'm your Grease Trap sizing Calculator, ready to calculate the right size for you!

[Click Link](#)

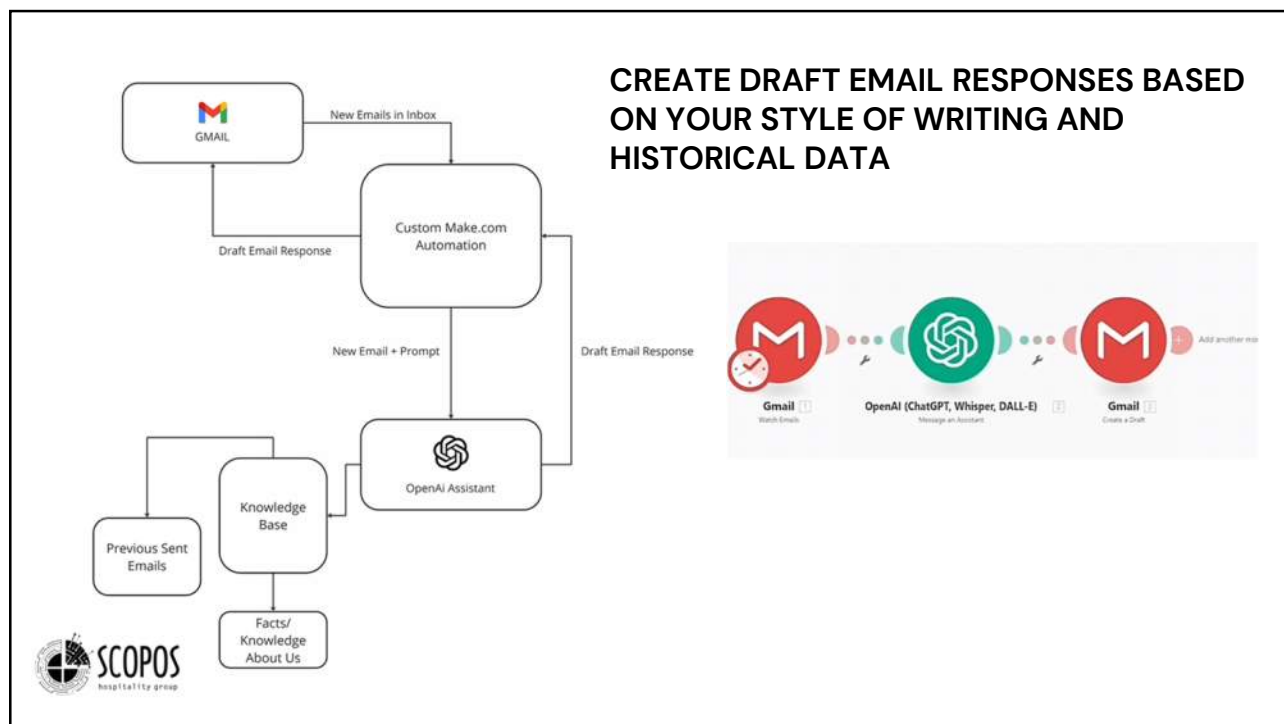
Dumpster Sizing

I'm your Dumpster sizing Calculator, ready to calculate the right size for you!

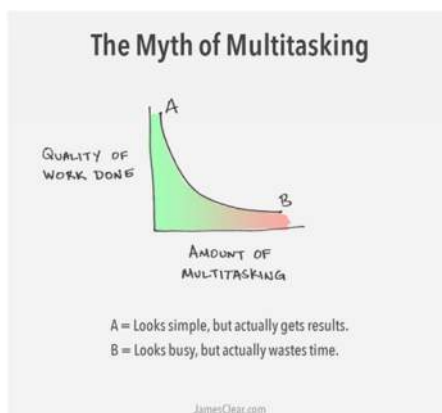
[Click Link](#)

USING MAKE TO AUTOMATE STEPS & "SPEAK" TO OTHER APPS & TRIGGER ACTIONS





How do you focus on the client during the meeting with back to back meetings ?



THE MYTH OF MULTITASKING

YOUR BRAIN
ON ONE TASK



(HAPPY BRAIN)

YOUR BRAIN
MULTITASKING



UNUSED BRAIN JUICE

THE POWER OF AI IN NOTE TAKING



Total number of conversations

200 10%↓
vs previous time period

Average conversations per teammate

73 16%↓
vs previous time period

Total time spent in conversations

157:58 hrs 2%↓
vs previous time period

Average time spent in conversations per teammate

55:44 hrs 9%↓
vs previous time period



Conversations

Data is compared with previous time period

Teammates · 6

Avg. conversations · 73

#

A	Andrey Teleguz	146	9%↓
A	Allison Dommel	111	13%↓
M	Matt Schuler	101	10%↓
D	Dawn Beck	57	36%↓



Time spent in conversations

Data is compared with previous time period

Teammates · 6

Avg. time spent · 55:44 hrs

Hours

A	Andrey Teleguz	101:15	17%↓
A	Allison Dommel	96:06	7%↑
M	Matt Schuler	83:53	3%↑
D	Dawn Beck	41:33	30%↓

OVERVIEW, ACTION ITEMS, NOTES



Overview: Customize

Larry Graeve, Jay Weingarten, and Andrey Teleguz are planning their presentation format, debating between breakout groups and a traditional presentation. They address slide numbers, individual speaking times, and consider using AI for spell-checking. The focus shifts to AI in architecture, with Jay discussing AI's collaboration benefits in creative processes, citing construction tech advancements like Dusty Robot, J-Bot, drones for monitoring, and preconstruction tasks.

- The conversation emphasizes the need for personal relationships with subcontractors, highlighting the importance of countering addressing construction outcomes.

Action items:

Jay Weingarten

- Explore the possibility of using AI to generate captivating concepts (11:21)
- Consider the ethical and security considerations of AI (12:21)
- Reflect on what questions aren't being asked in relation to AI (15:09)
- Discuss the use cases of AI in architecture, particularly streamlining early

Larry Graeve

- Investigate the feasibility of using AI for market studies and cost estimation
- Utilize drones for progress photos, monitoring sound levels, and checking
- Gather unit pricing information from subcontractors through personal in

Notes:

Clarification on Breakout Groups

- Jay Weingarten suggests discussing whether to have breakout groups or just a traditional presentation.
- Larry Graeve agrees to consider this over the next couple of weeks.

Using AI for Spell Checking

- Andrey Teleguz suggests using an AI tool for spell checking the presentation.
- Larry Graeve agrees and mentions getting feedback from others.

Live Demo of Notetaker AI Tool

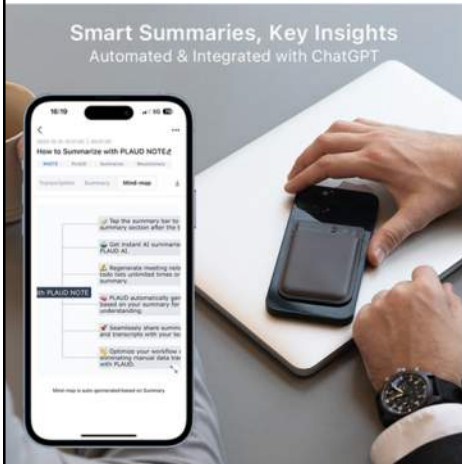
- Jay Weingarten suggests including a live demo of a notetaker AI tool in the presentation.
- Andrey Teleguz mentions the need to stop the AI tool during the Q&A session for processing.
- Larry Graeve agrees and suggests having a screenshot of the AI tool's summary after the meeting.

Presentation Structure and Introduction

- Jay Weingarten discusses the structure of the presentation and the need for an introduction.
- Larry Graeve acknowledges the need for an introduction.

PLAUD NOTE ChatGPT Empowered AI Voice Recorder

Smart Summaries, Key Insights
Automated & Integrated with ChatGPT



PLAUD NOTE

Record.
Transcribe.
Summarize.



Powered by ChatGPT



Summary by Copilot



[redacted] requested that any changes/deletions to the food service equipment be documented in the food service drawings.

Dawn Beck confirmed that an updated set of food service drawings will be issued by 01/12 and requested the Specification Header and Title Block from [redacted]

Dawn Beck instructed Bryan Caaya to post the specs and submittals to the [redacted] Brookline project channel.

[redacted] provided the Foodservice spec word document and instructed to keep the ADD #1 items indicated and to cloud and tag the latest changes as CCD-008.

[redacted] asked if the submittals were saved in the submittals folder and Dawn Beck confirmed that the [redacted] Submittals and Cutbooks were saved to the project folder.



AI-generated content may be incorrect



EMAIL REVIEW & ENHANCEMENTS



Send From: To: Re: Smallware's Bakery Display Draft saved at 11:39 AM

Coaching by Copilot Preview

Tone
Could be more polite

Reader Sentiment
Show some enthusiasm

Clarity
Provide some context

Could be more polite
The email sounds a bit abrupt and demanding. A more polite tone would show respect and appreciation for the client and the architectural team.

Suggestions
Instead of "can you run this by your client" the email could say "would you please run this by your client". Consider changing the sign off to "thank you".

AI-generated content may be incorrect

The architectural Team would like reassurance that we are all of the same expectation with the client and that confirmation? thanks

Check the message
AI-generated content may be incorrect, so be sure to check the message before sending it.

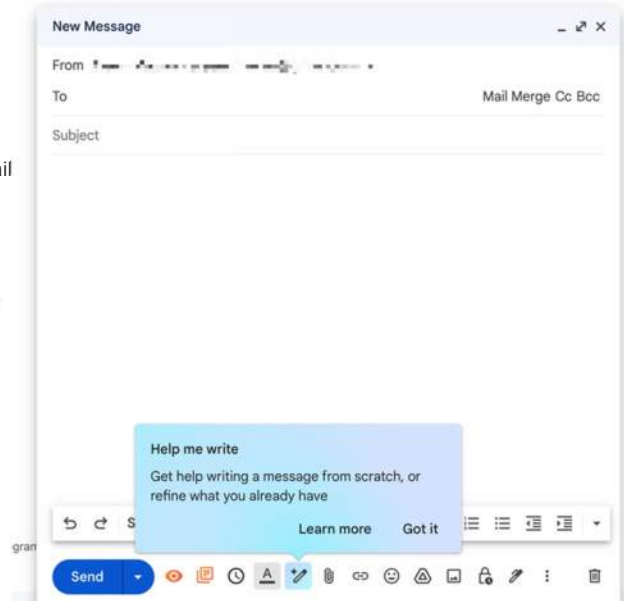
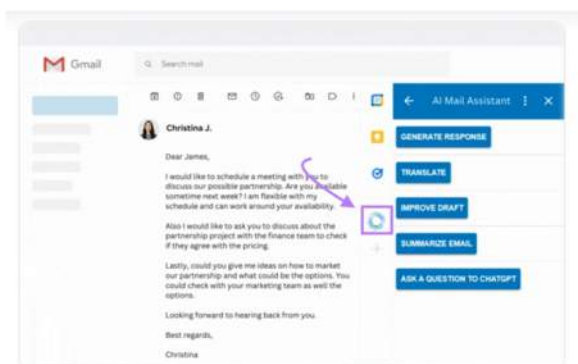
Send Don't send

SCOPUS Hospitality Group
300 W. Chestnut St., Ste 201, Ephrata, PA 17522
717.733.8810 FAX 717.736.1833

out who
Hope Clo
Friday, Jan
wn Beck <dbeck@scoposhg.com>

Unlock AI-assisted Gmail Writing

The Rundown: Google's new 'Help me write' feature grants Gmail direct access to Gemini, allowing Google Workspace users to draft full emails in seconds from simple prompts.



GPT'S DEMO

Example Calculation:

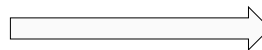
Total Grease Production: 500 meals/day × 30

grams/meal = 15,000 grams/day

Conversion to Pounds: 15,000 grams / 454

grams/pound ≈ 33.04 pounds/day

Grease Trap Size: (500 meals/day × 33.04 pounds / 7 days) × 1 ≈ 2,360 gallons



- ChatGPT
- Bid Analyst
- SCOPOS Marketing
- Convert Anything
- Price Check Pro
- Client Profile Evaluato...
- SHG Code Agent
- Grease Trap Calculator**
- SHG Spec-2-Punch Ex...
- Prospect Profiler
- See less ^
- Add Team workspace
Collaborate on a Team plan
- AT Andrey Teleguz

GPT'S GREASE TRAP CALCULATOR



Grease Trap Calculator

To calculate the appropriate size for a grease trap in a restaurant serving 500 meals daily, we'll follow the outlined steps:

1. Total Grease Production:

We start by estimating the total grease production. For 500 meals per day, with an average grease production of 30 grams per meal, the calculation is:
Total Grease Production = 500 meals/day × 30 grams/meal

2. Conversion to Pounds:

Next, we convert the total grease production from grams to pounds. There are 454 grams in a pound. The conversion is:

$$\text{Grease Production in Pounds} = \frac{\text{Total Grease Production in Grams}}{454 \text{ grams/pound}}$$

3. Grease Trap Size:

Finally, we calculate the grease trap size. The formula is:

$$\text{Grease Trap Size} = \left(\frac{\text{Meals per day} \times \text{Grease Production in Pounds}}{7 \text{ days}} \right) \times 1$$

Let's perform these calculations for your specific scenario.

Based on the calculations for a restaurant serving 500 meals daily:

1. Total Grease Production:

$$500 \text{ meals/day} \times 30 \text{ grams/meal} = 15,000 \text{ grams/day}$$

2. Conversion to Pounds:

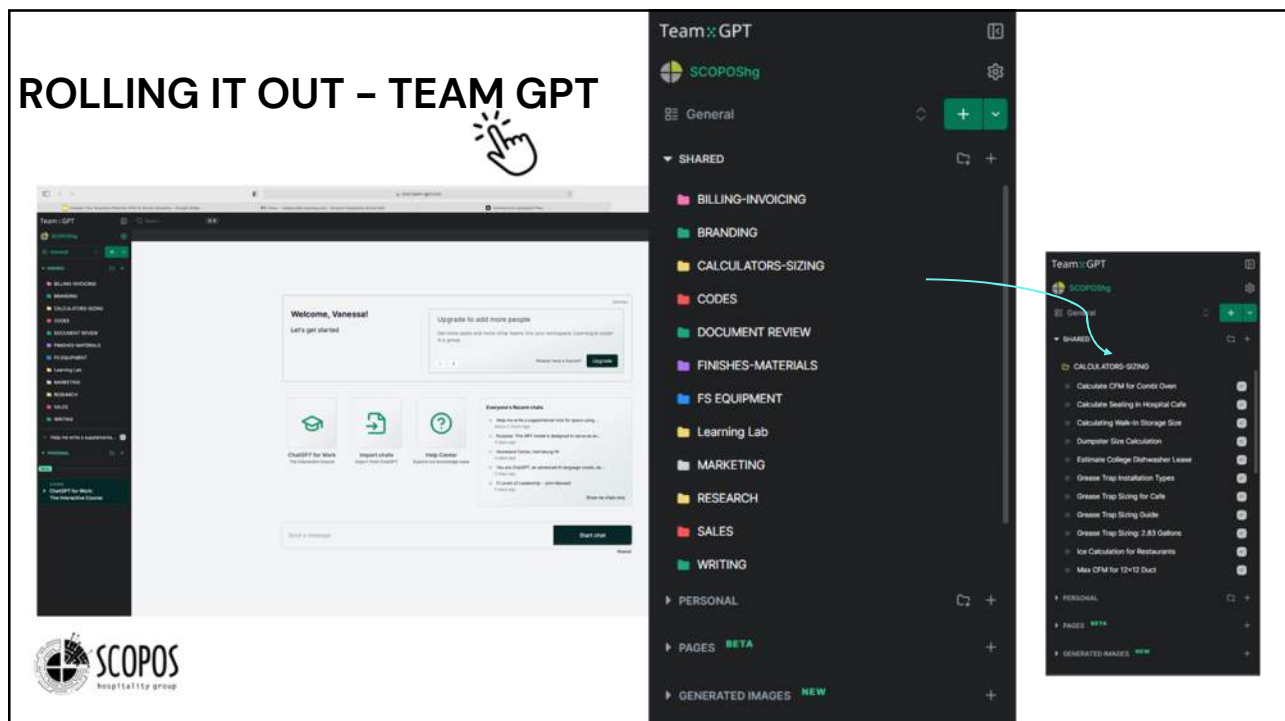
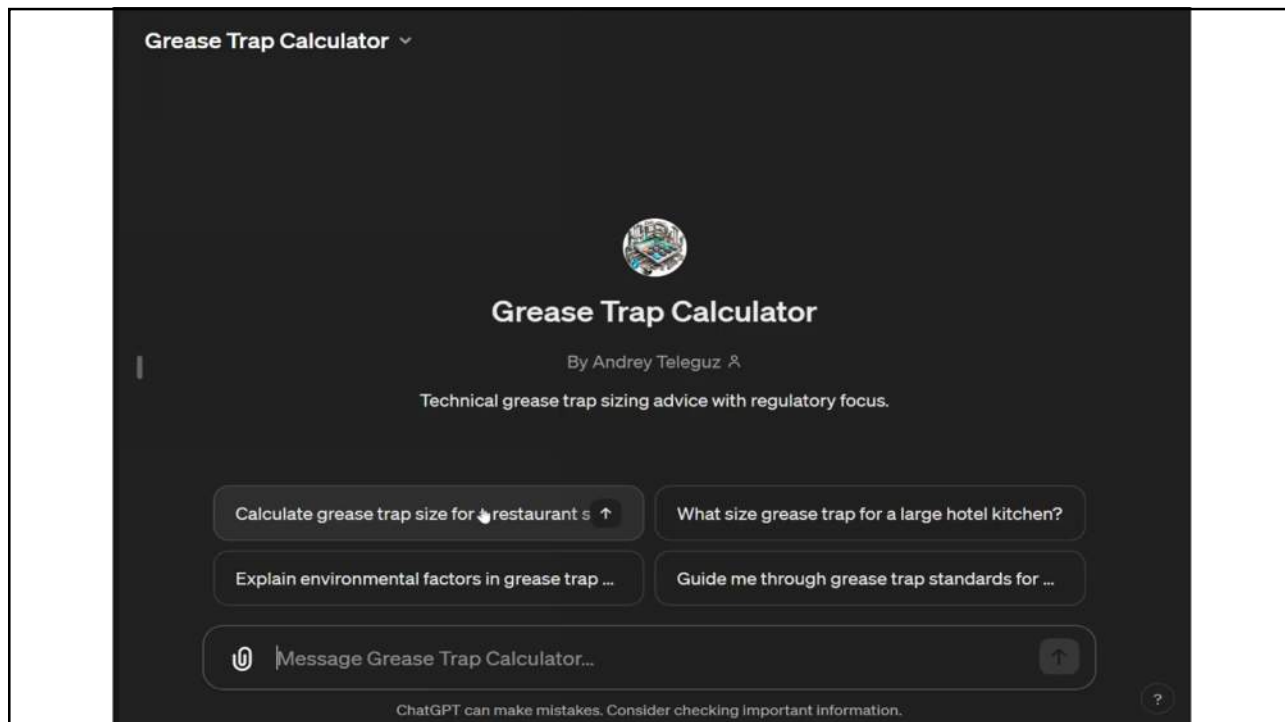
$$\frac{15,000 \text{ grams}}{454 \text{ grams/pound}} \approx 33.04 \text{ pounds/day}$$

3. Grease Trap Size:

$$\left(\frac{500 \text{ meals/day} \times 33.04 \text{ pounds}}{7 \text{ days}} \right) \times 1 \approx 2,360 \text{ gallons}$$

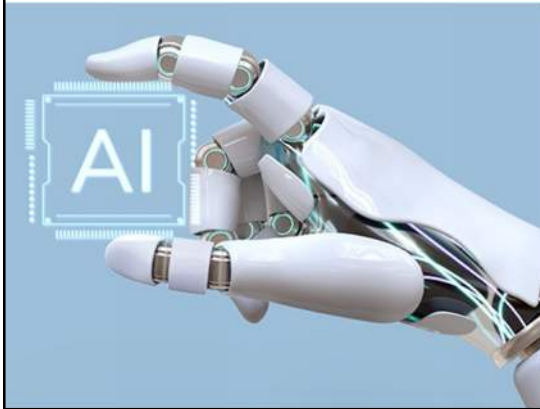
Therefore, for a restaurant serving 500 meals per day, a grease trap size of approximately 2,360 gallons would be suitable. [↩]





ROBOTICS MEETS AI

Artificial Intelligence (AI)
The Internet of Things (IoT)
Digital Twins (DTs)
Robotics (R)



CURRENT ROBOTICS MARKET



PIVOTAL POINT: CHEF & TECHNOLOGY

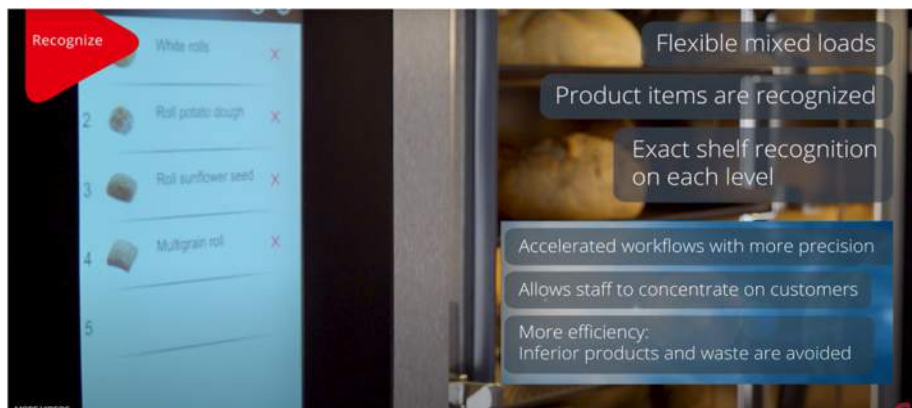
- Chefs have always cooked by feel, time & temperature
- Chefs, passion & instant gratification
- Labor pool is shrinking across the country especially BOH = stress
- Today different perspective, passionate, but also want life balance



IN TRAINING: CONVOSENSE AI COOKING

- STAFF TURNOVER
- TOO MUCH TRAINING

- RECOGNIZE
- UNDERSTAND
- ACT



- GENERATE EFFICIENCY & REDUCE COST
- GUARANTEE CONSISTENCY



INTELLIGENT FRENCH FRY ROBOTIC SOLUTION



PrepPal Cook Rite Mixrite
WE MAKE THE KITCHEN BETTER
www.atosausa.com



INTRODUCING ATOSA AUTO SEASONING & AUTO PACKAGING SOLUTION



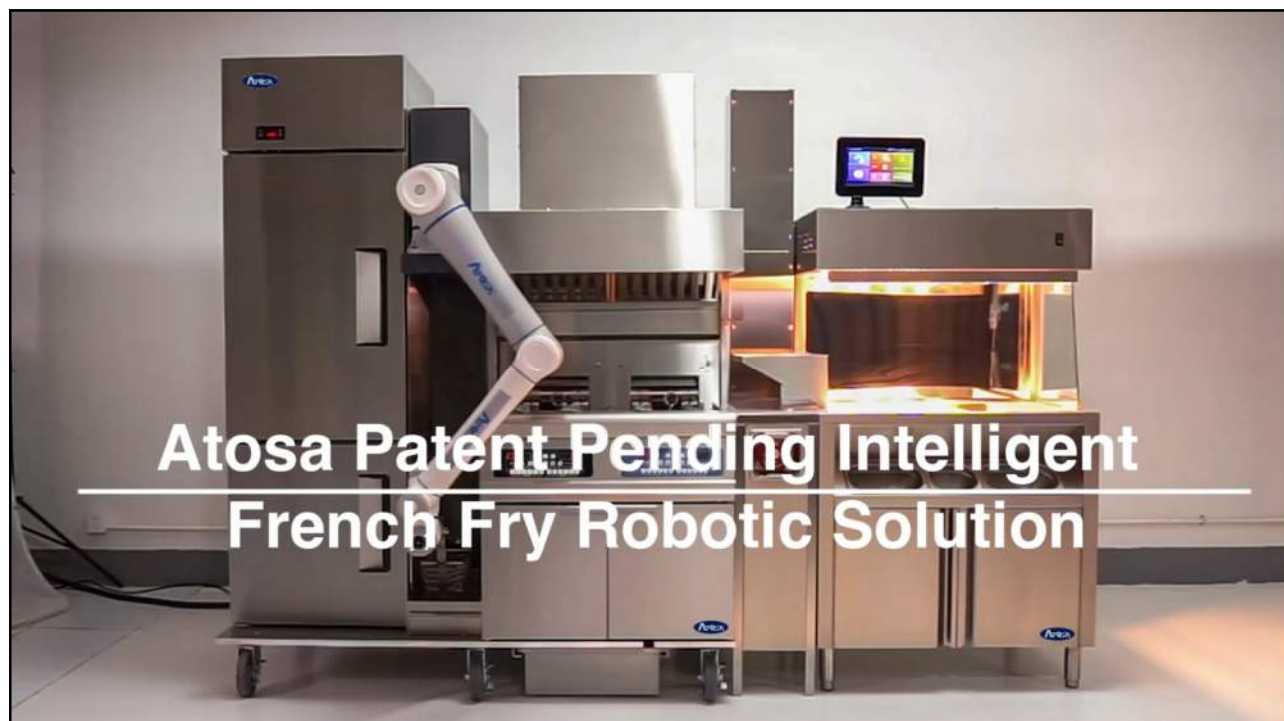


STANDARD FEATURES

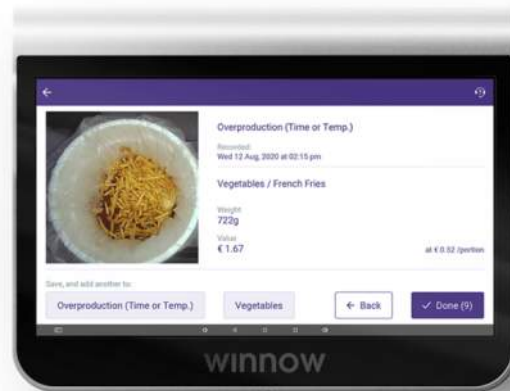
- Choice of refrigerated or frozen dispensers. Single, double, or triple sized dispensers are available.
- The dispensers can be used with the robotic arm or product can be manually dispensed.
- 6-Axis Co-bot Arm available in 51", 55", 63" sizes.
- Touch Screen Control Panel.
- Hood with Ansul Fire Suppression System.
- Stations are interchangeable, allowing both left-to-right or right-to-left functionality.
- Robotic arm and dispensers are the only

STANDARD FEATURES

- Secondary Dumping Area: Allows for 2nd & 3rd items to wait to be seasoned and is a warming area. Our removable warming tray system allows you to transition product to a warming cabinet or serving line.
- Control Module: Allows for versatility in sizing (L/M/S/K) of cartons for the orders.
- Packaging Module: Automatically packages the carton size selected.
- Organizing Robot Arm: Picks up the filled cartons and organizes them in the warming pick-up area for manual selection.



Ai To Manage Food Waste



- Identifies the food
- Categorizes the food
- Identifies cost (type/weight)
- Generates data analytics/reporting
- **30%-60% Waste Reduction!**

AI-Enabled Imaging Systems

Advanced imaging technologies use cameras and AI to assess the visual and sometimes non-visible attributes of stored food items.

Systems like AgShift and ImpactVision analyze photographs of food to detect spoilage and assess quality. These systems can be integrated into the inventory process to provide regular checks without requiring manual sample inspection.



Predictive Analytics Platforms

Tools like Crisp, Spoiler Alert, and Leanpath use predictive analytics to help kitchens forecast spoilage risks based on historical data and current inventory practices. These insights can guide better purchasing decisions and inventory rotation practices.



Automated Inventory Management Systems

Combining AI with the data collected from sensors and tags, these systems can predict when products will likely expire and alert staff to use certain items quickly. This reduces waste and improves safety by preventing spoiled food from being served.



Digital Twin Technology

This involves creating a virtual model of the kitchen's storage environment that can simulate and predict how different factors affect food freshness. It uses real-time data gathered from sensors to update the model continuously.



IN TESTING: FAST FOOD AI ORDERING – DRIVE THROUGH

- Uses facial recognition
- Greets the customer by name
- Offers personalized order customization
- Asks if the client wants to order their usual
- Confirms if it is ok to use the card on file



ROBOTIC INDUSTRY FOOD SERVICE MARKET



Fully-automated restaurant in Pasadena, California, is using robot cooks and AI-powered ordering kiosks.



World's First AI-Powered Restaurant Opens in California

A Futuristic Culinary Experience

Guests at CaliExpress by Flippy are in for a treat beyond the menu. The restaurant offers a pseudo-museum experience, featuring dancing robot arms, experimental 3D-printed artifacts, and captivating photographic displays. It's not just a dining experience; it's a glimpse into the future of dining. The restaurant's location at the northwest corner of Green Street and Madison Avenue becomes a hotspot for those eager to witness the fusion of technology and gastronomy.

The Robot Chefs in Action

The heart of CaliExpress by Flippy lies in its fully automated fry and grill stations. Customers can watch in awe as robotic chefs

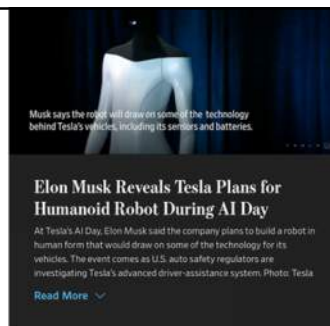
World's First AI-Powered Restaurant Opens in California

[K.C. Sabreena Basheer](#)
04 Jan, 2024 • 2 min read

In an interesting technological leap, Southern California witnesses the world's first fully autonomous, AI-powered restaurant. The debut branch of CaliExpress by Flippy, located at 561 E. Green St. in Pasadena, takes this prestigious title. Here, robots take center stage in the kitchen, handling everything from flipping burgers to deep-frying French fries. This culinary revolution is a collaboration between Cali Group, Miso Robotics, and Pop!D, and promises a dining experience like no other.

The Rise of the Machines

OPENED JANUARY '24



Tesla Humanoid



**OpenAI & Figure Humanoid
(Amazon, Nvidia funded)**



ARE YOU READY FOR THE FUTURE?





Thank you for your attention!

