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USING AI TO AMPLIFY THE ACCURACY OF HUMAN FORECASTERS

Dr Louis Rosenberg, CEO and Chief Scientist, Unanimous AI

Webinar

Wednesday, 11 August 2021, 16:00 BST

A Word From Today's Chairman

Hugh Morris

Senior Research Partner

Z/Yen Group

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Today's Agenda

- 16:00 – 16:05   Chairman's Introduction

- 16:05 – 16:25   Keynote Presentation

  - Dr Louis Rosenberg

- 16:25 – 16:45   Question & Answer

Dr Louis Rosenberg

CEO and Chief Scientist

Unanimous AI

Using AI
to Amplify the Accuracy
of Human Forecasting

Louis Rosenberg, PhD

CEO, Unanimous AI

TECHNOLOGY → SWARM AI
- Based on the Biological Principle of **SWARM INTELLIGENCE**
- Uses A.I. to amplify the intelligence of HUMAN GROUPS

VALIDATION
- **Published Studies** – MIT, Oxford, Cambridge, Stanford

APPLICATIONS
- **Financial Forecasting**
- **Sales Forecasting**
- **Sports Handicapping**
- **Equity Speculation** (Hedge Funds)
- **Medical Diagnosis**

Q&A

UNANIMOUS AI

PEOPLE ARE SMART

- **Knowledge**
- **Wisdom**
- **Insights**
- **Experience**
- **Intuition**
- **Instincts**

HOW CAN WE BEST HARNESS AND AMPLIFY THE **INTELLIGENCE** OF **HUMAN GROUPS**?

UNANIMOUS AI

Nature evolved an **optimized method** for **amplifying** the **Intelligence of groups**

- **Nature does NOT:**
    - take <u>votes</u> or <u>polls</u> or <u>surveys</u>
    - analyze historical <u>data-sets</u> (big data)

- **Nature forms SYSTEMS:**
    - Real-time systems with **feedback loops** that enable groups to converge on **optimal solutions**
    - Biologists call this Swarm Intelligence
    - It's why <u>birds flock</u>, <u>fish school</u>, and <u>bees swarm</u>
    - They're **smarter together** than alone.

Swarm Intelligence

If birds, bees, and fish **can get smarter** in **swarms** → **Why can't people do it?**

UNANIMOUS AI

Natural Swarm
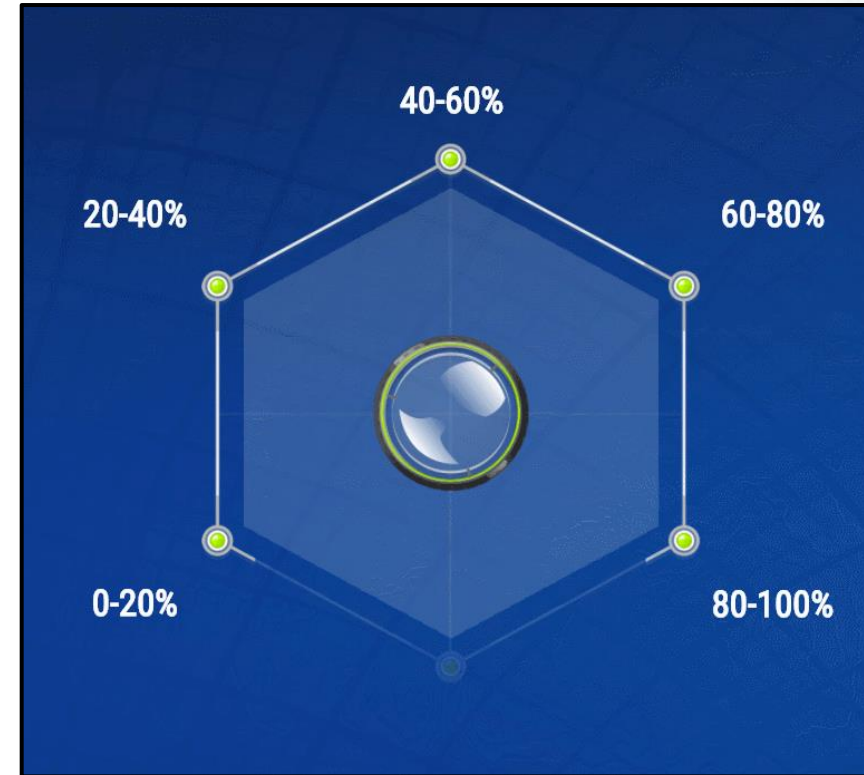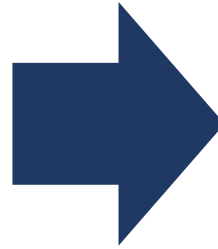
Artificial Swarm

Swarm is a real-time system with participants <u>acting</u>, <u>reacting</u> and <u>interacting</u>, revealing the <u>strength of their convictions</u> to the underlying algorithms.
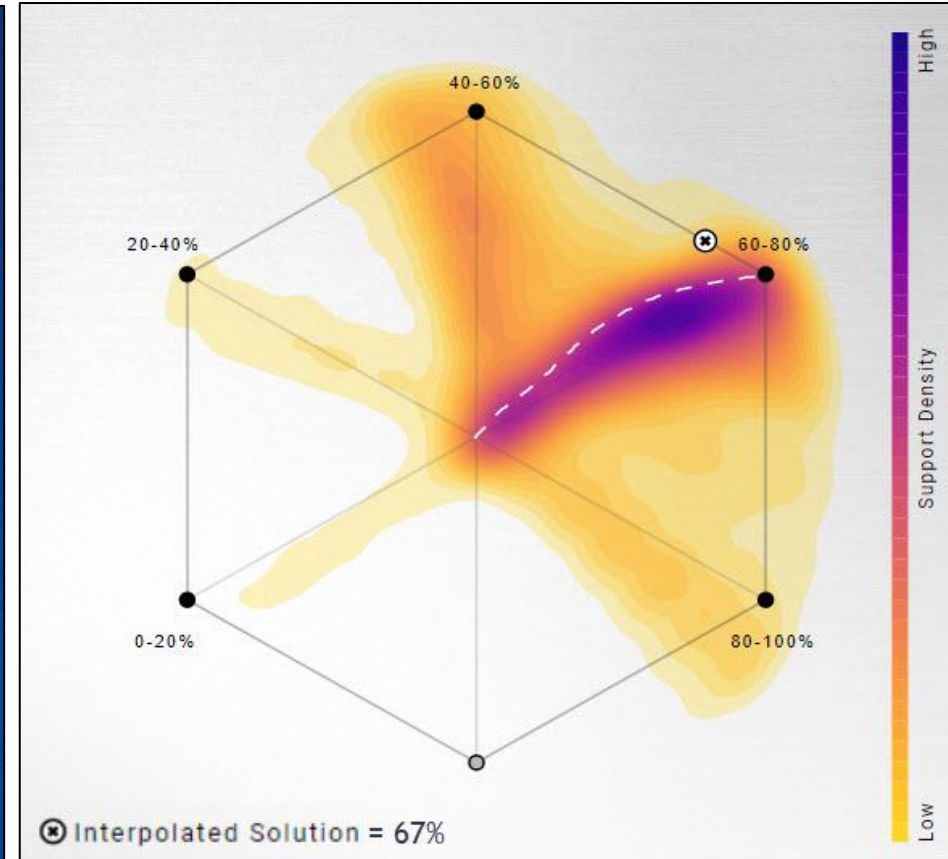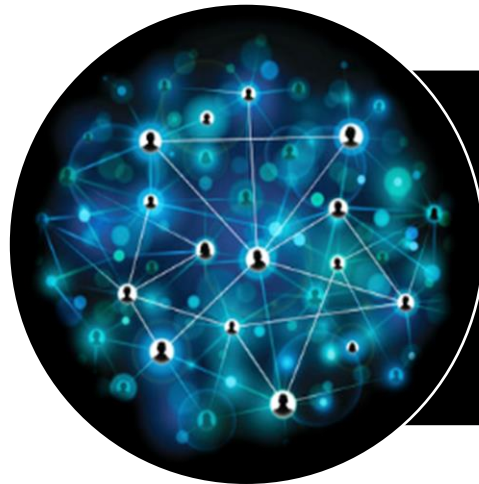
UNANIMOUS A I

What YOU see:

40-60%

20-40%   60-80%

0-20%   80-100%

What the AI sees:

40-60%

20-40%   60-80%

0-20%   80-100%

Support Density — High / Low

⊗ Interpolated Solution = 67%
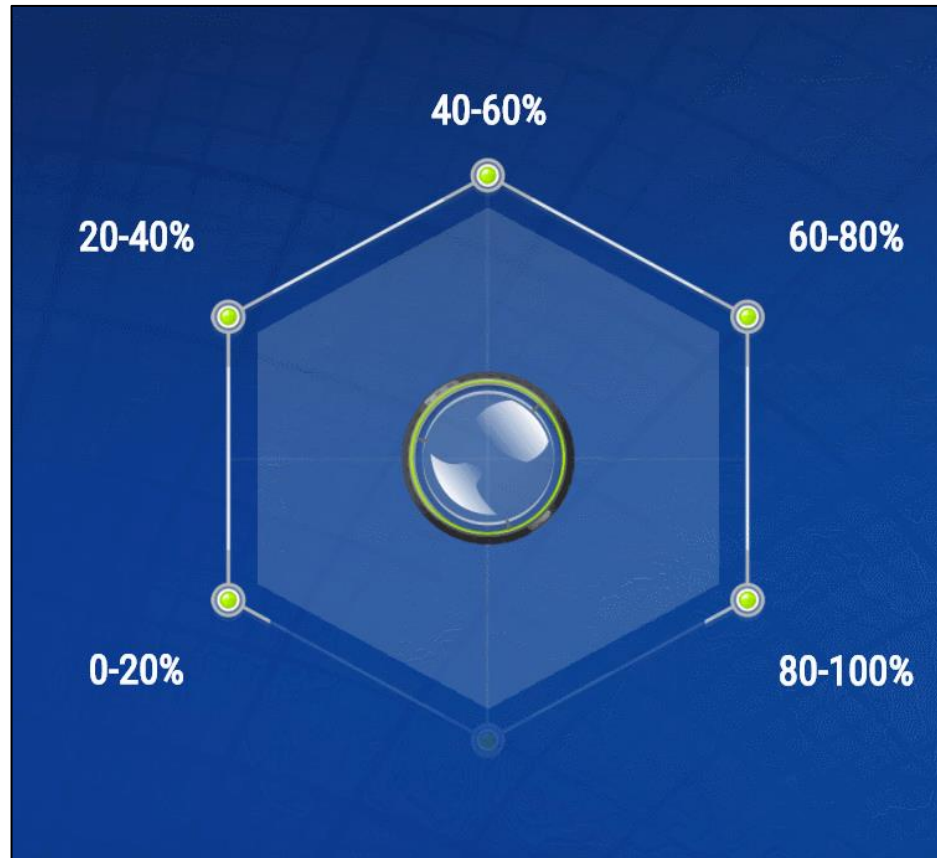
SWARM AI analyzes HUMAN SENTIMENTS in real-time, finding the optimal combination of the group's wisdom based on their varying confidence.

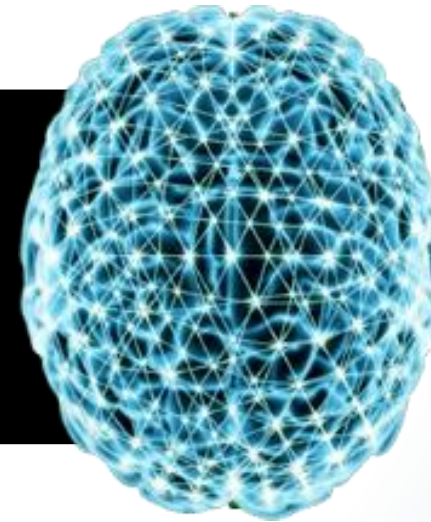UNANIMOUS AI

Validated by Academic Research

MIT published a 20 week study with us showing that Swarm enabled small groups of <u>financial traders</u> to amplify the accuracy of their **market forecasts**.

Weekly Forecasts of **Gold**, **Oil**, and **S&P**.

Amplified their accuracy by **26%**

California Polytechnic published a study of <u>60 business teams</u>, each of 6 or fewer people on a **Subjective Judgement** test.

Group Voting reduced errors by **9%**

Swarm AI reduced errors by **52%**

Oxford University published a study on Swarm with Sports Fans to predict the outcome of <u>50 Pro Soccer Games</u>.

Individuals = **55% accurate**
Vote = **58% accurate**
Swarm AI = **72% accurate**

Stanford Medical School published a study showing that Swarm enabled <u>radiologists</u> to significantly amplify the accuracy of **medical diagnoses**

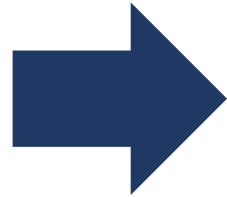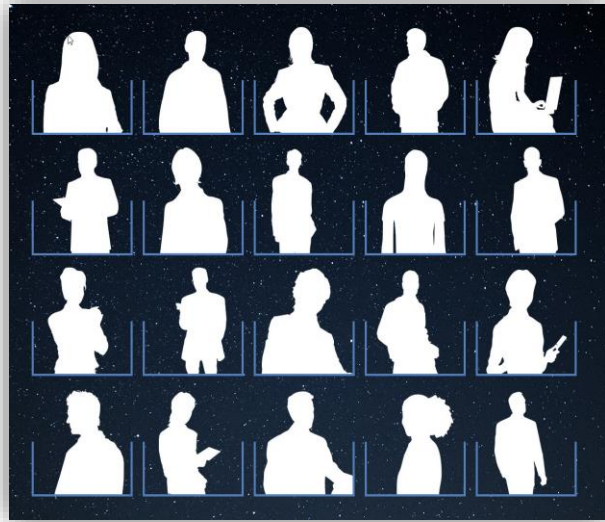Reduced diagnostic errors by **33%**

UNANIMOUS AI

50 PEOPLE

- All they need is a **standard browser**

- Each participant gets an **invite** by email, text, calendar, or slack.

- **Participants enter** the **Swarm workspace** with all other participants.

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REAL-WORLD EXAMPLE

Chat Here

Media Here

Swarm Here

Group Info Here

OSCAR FORECAST ACCURACY
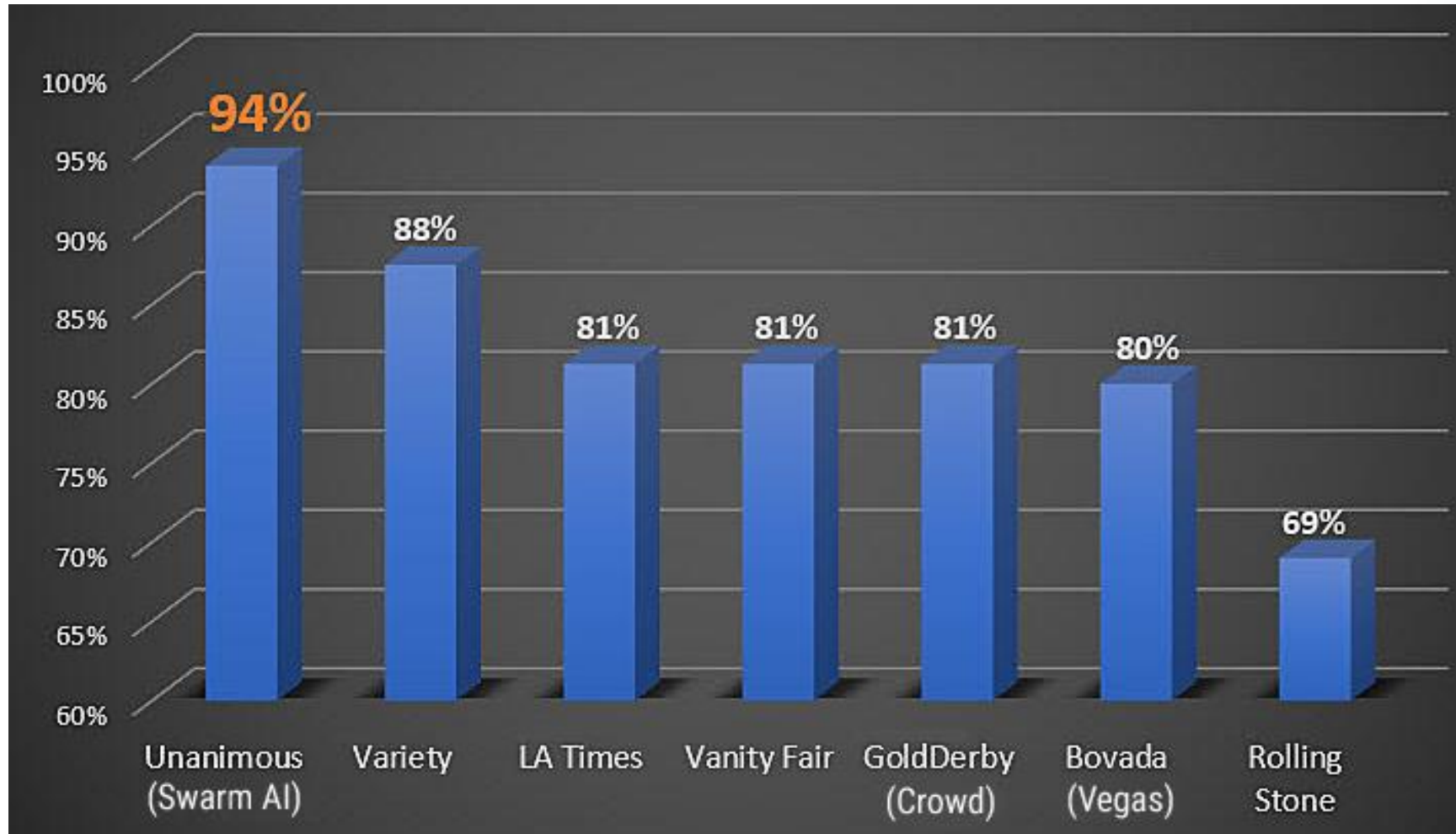
Why does it work so well?

SWARM INTERFACE

(Frontend Client)

AI ENGINE

(Cloud Backend)

Who will win for Best Actress in a Leading Role?

Jennifer Lawrence (Joy)

Brie Larson (Room)

Charlotte Rampling (45 Years)

Cate Blanchett (Carol)

Saoirse Ronan (Brooklyn)

SWARM AI

0:60

BRAIN SCAN: Swarm Number 9769

Cate Blanchett (Caro

Brie Larson (Room)

Jennifer Lawrence (J

Charlotte Rampling (

Saoirse Ronan (Brook

Expressed Answer

Swarm Time (seconds)

Support

UNANIMOUS AI
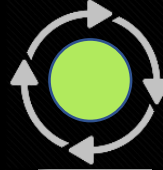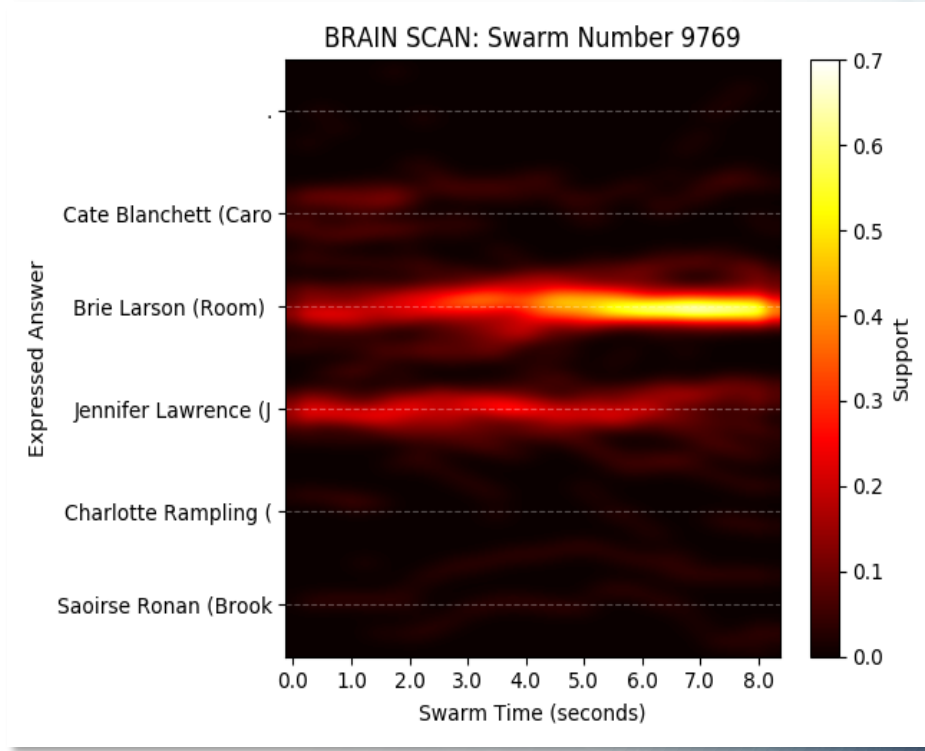
Business Applications
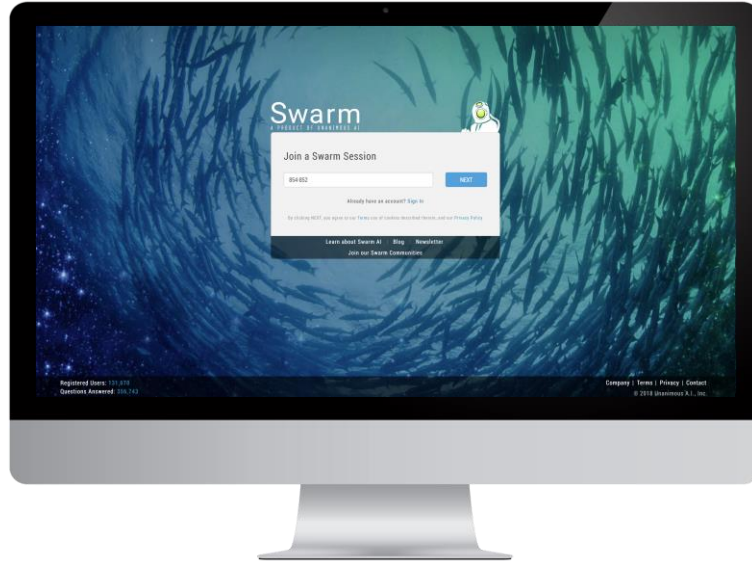
OPTIMIZED

- **Forecasts**
- **Decisions**
- **Evaluations**
- **Predictions**
- **Prioritizations**
- **Assessments**
- **Comparisons**
- **Insights**

Internal Teams

- **Sales Teams**
- **Marketing Teams**
- **Engineering Teams**
- **Financial Teams**
- **Executive Teams**
- **HR Teams**

External Teams

- **Customers**
- **Distributors**
- **Influencers**
- **Analysts**

UNANIMOUS AI

EXAMPLE:

Use SWARM AI to predict FAMINES around the world

- **Food & Agriculture Organization (FAO) of the United Nations**

    - Group of Experts (IPC) → assess the **Food Insecurity Risk** of various nations

    - High Stakes → based on assessment, **relief agencies** provide **critical aide**

- **Use SWARM → Assess food risk in various nations** (Haiti, Malawi, South Africa...)

    - 20+ Participants → **Connected Remotely** from a dozen different countries

    - Assess Risk → **Scale of 1 to 5** (from Food Abundance to Likely Famine)

    - Success → **Same Results** as Traditional Process (in person meetings)
        - **EVERYONE EQUAL / ANONYMOUS**
        - **MUCH FASTER OUTCOMES**
        - **GREATER BUY IN / SUPPORT**
        - **REMOTE PARTICIPATION**

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- **Large Clothing Retailer**
  - **S&P 500 Company**

- **Predict Holiday Sales**
  - **Woman's Sweaters**

- **Participants**
  - **"Fashion Conscious" Women**
  - **3 Groups of 15 → (45 total)**

- **Business Goal**
  - **Predict Best Sellers and Worst Sellers**

COMPARE: Traditional Survey - to - Swarm AI

UNANIMOUS AI

Which style will sell the FEWEST of this holiday season?

Sweater B
Sweater A
Sweater C
Sweater F
Sweater G
Sweater D

3

SWARM

0:60

Support Density Plot of Question 371339

Sweater B
Sweater A
Sweater C
Sweater F
Sweater G
Sweater D

HIGH
Support Density
LOW

Final Brainpower: 0.69

UNANIMOUS AI
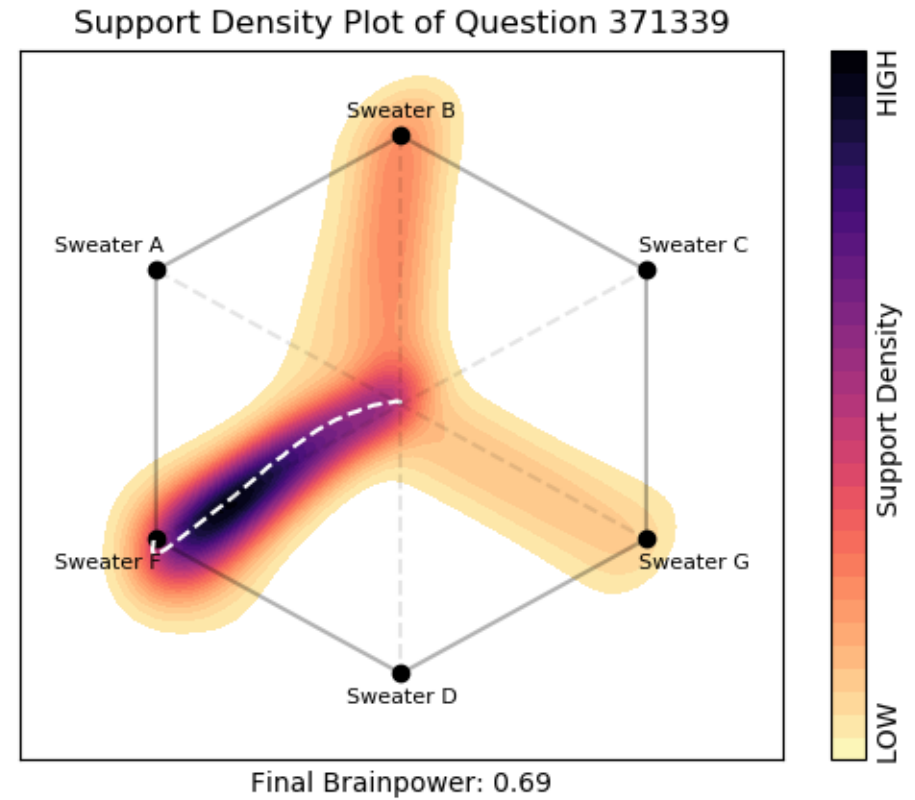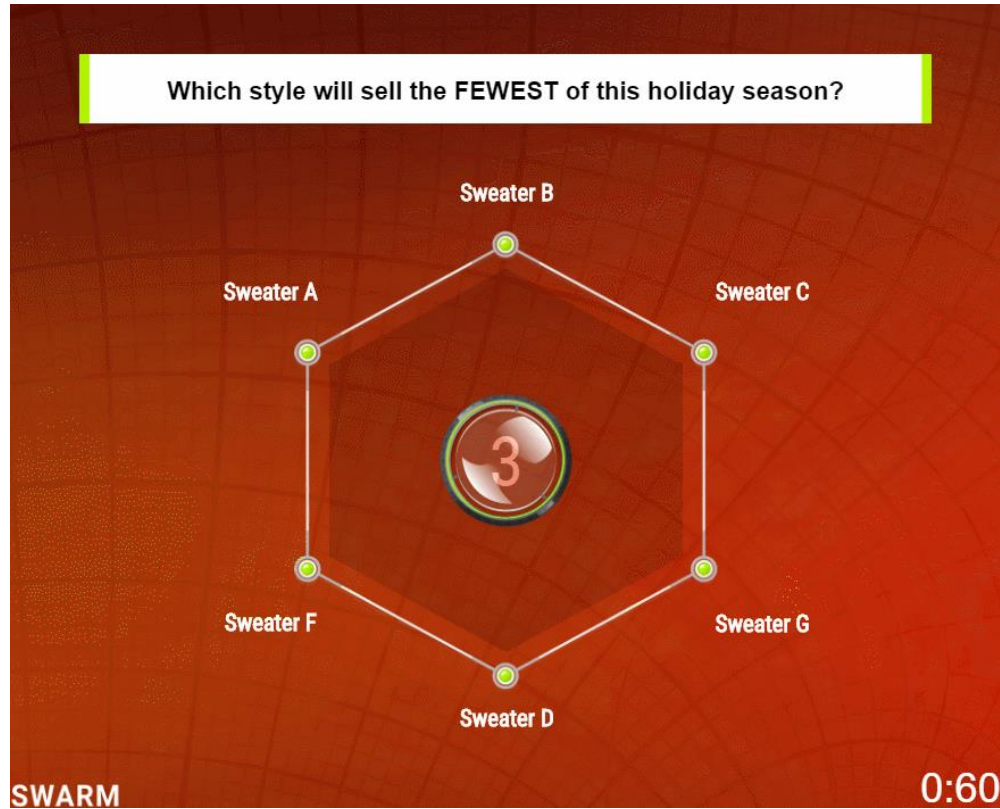
Sales Forecasting

SWARM RESULTS:

Rank	Scaled Rank	Item
1st	1.0	Sweater C
2nd	2.8	Sweater A
3rd	2.9	Sweater B
4th	5.4	Sweater F
5th	5.6	Sweater D
6th	5.7	Sweater H
7th	6.9	Sweater E
8th	8.0	Sweater G

Actual Sales

$1,766,000

$606,000

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Sales Forecasting

SWARM

Rank	Scaled Rank	Item
1st	1.0	Sweater C
2nd	2.8	Sweater A
3rd	2.9	Sweater B
4th	5.4	Sweater F
5th	5.6	Sweater D
6th	5.7	Sweater H
7th	6.9	Sweater E
8th	8.0	Sweater G

$1,766,000 (Top 4)

$606,000 (Bottom 2)

SURVEY

Rank	Scaled Rank	Item
1st	1.0	Sweater C
2nd	2.0	Sweater D
3rd	3.0	Sweater A
4th	4.0	Sweater G
5th	5.0	Sweater F
6th	6.0	Sweater H
7th	7.0	Sweater B
8th	8.0	Sweater E

$1,434,000 (Top 2)

$1,509,000 (Bottom 2)

SWARM vs SURVEY:

TOP 4 chosen by Swarm sold **23.7% more** than the TOP 4 chosen by survey.

UNANIMOUS AI

Swarm AI

Knowledge
Wisdom
Experience
Opinions
Insights
Intuition

AI

More Accurate

Forecasts
Estimations
Assessments
Decisions
Predictions
Insights

Networked Human Groups

Artificial Experts

UNANIMOUS AI
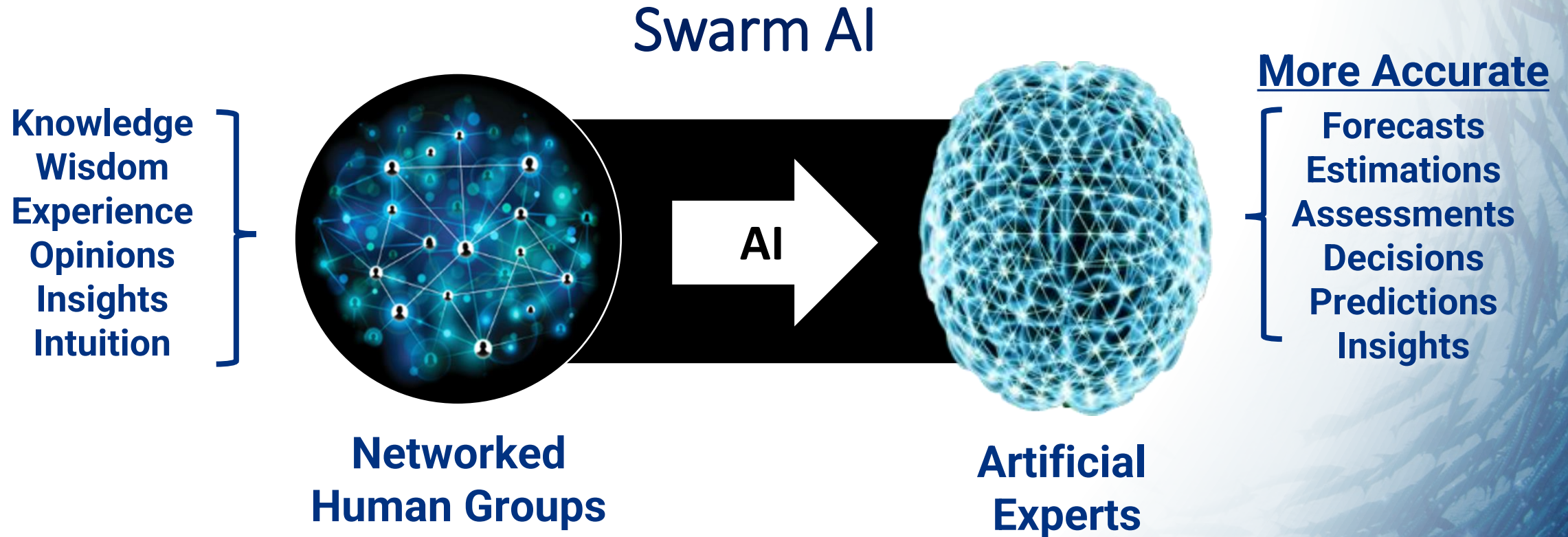
CLOSING THOUGHTS

Forecasting with Swarm AI:

- **Optimizes** the combined Knowledge, Wisdom, and Insights of Human Groups

- **Amplifies** the Accuracy of Forecasts, Assessments, Decisions, and Predictions

- **Speeds Deliberation**, enabling Faster group assessments.

- **Reduces Social Barriers** as everyone is equal and anonymous.

- **Promotes Buy-in** from participants, as they experience consensus.

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QUESTIONS?

Contact Info:

Company Website: **Unanimous.ai**

Product Website: **Swarm.ai**

My Email: **Louis@Unanimous.ai**

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Comments, Questions & Answers

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Thank You For Listening

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Forthcoming Events

- Thu, 12 Aug (11:00-11:45)   Esop Sofa: Hot Topics In Employee Share Ownership

- Tue, 17 Aug (11:00-11:45)   The Financial Risks Of Nature Loss

- Wed, 18 Aug (11:00-11:45)   The Corona Crash: How The Pandemic Will Change Capitalism

Visit https://fsclub.zyen.com/events/forthcoming-events/