AWS re:Invent

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Improving the human experience in healthcare with Olive

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Introducing AWS for Health

Accelerating innovation from benchtop to bedside

aws

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AWS for Health



Clinical information systems



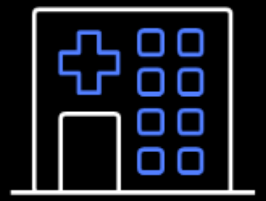
Analytics and AI/ML



Patient and clinician experience



Medical research



Finance and operations



Core health IT

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Healthcare needs the internet

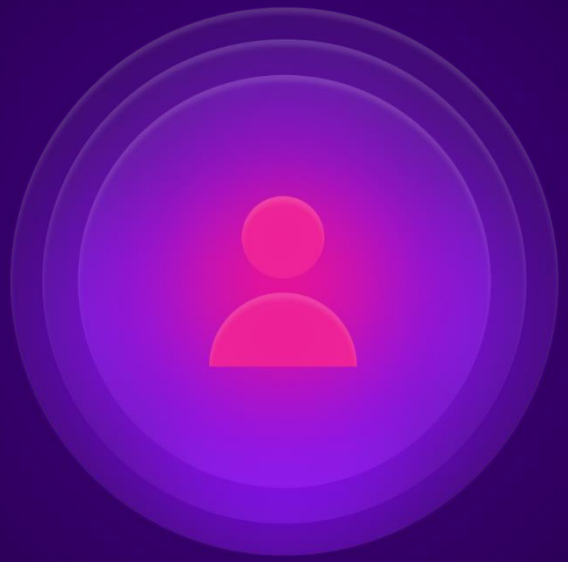
PRESENTED BY:

Rohan D’Souza (he/him)

Chief Product Officer
Olive AI, Inc.



Healthcare has a human problem





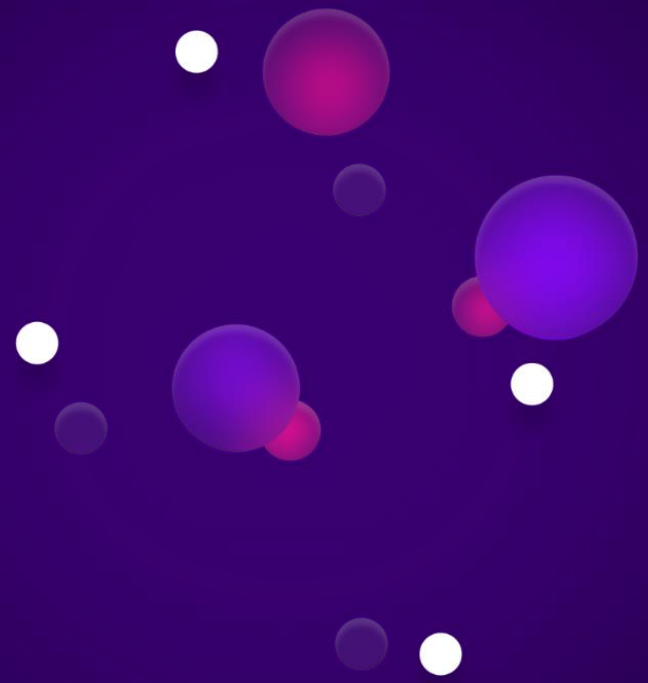
Healthcare doesn’t have the internet

16M human workers
4M human routers
8.6B hours

$1T of waste

Healthcare deserves true innovation that connects all its disconnected systems and provides unparalleled intelligence for today’s unprecedented demands

Healthcare cannot survive without innovating

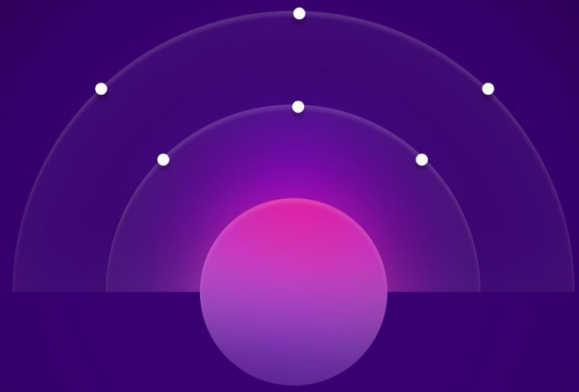


Administrative costs are estimated to account for one-quarter to one-third of the total US spending on health[1]

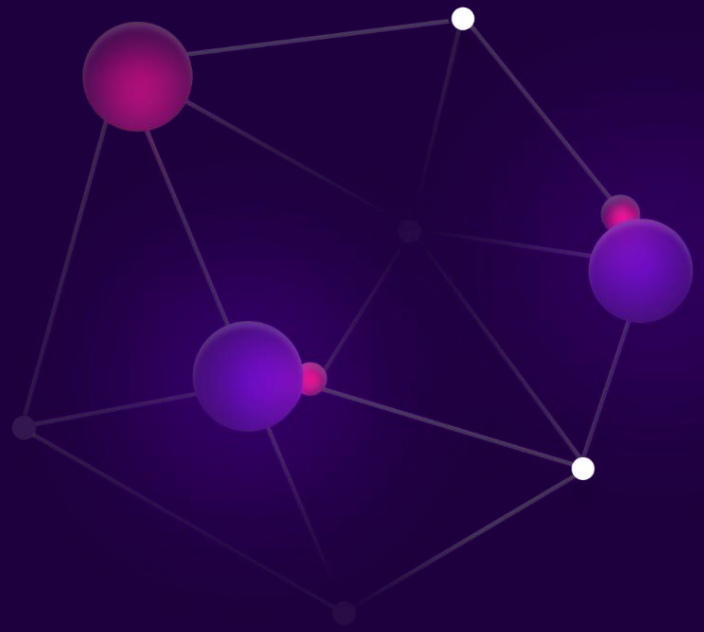
This is twice what the US spends on caring for cardiovascular disease and three times what it spends on cancer care

1 Kahn, James G., Richard Kronick, Mary Kreger, and David N. Gans. “The Cost of Health Insurance Administration in California: Estimates for Insurers, Physicians, and Hospitals.” Health Affairs 24 (8).

Enter:
Olive + AWS



Building the internet of healthcare

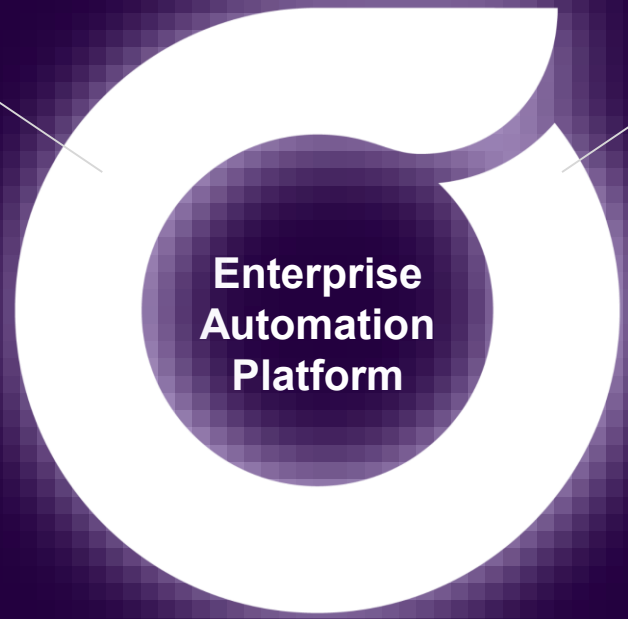


We built an enterprise automation platform for the entire healthcare system (both providers and payers)

AI worker

Olive automation human work

Olive **operates as an analogous human** – leveraging her hands (RPA), eyes (Computer Vision), ears and mouth (NLU/NLP), and brain (ML) to complete human work – and doing so in a more efficient and effective manner



AI co-worker

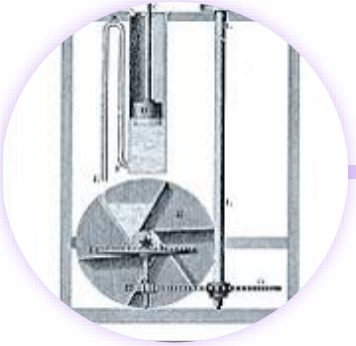
Olive assisting humans with their work

Olive senses what the user is doing on their desktop and **surfaces relevant real-time intelligence to help staff** with the task at hand – acting as their personal assistant and enabling them to be more efficient and effective

Automation • *noun*

the technique of making an apparatus, a process, or a system operate automatically

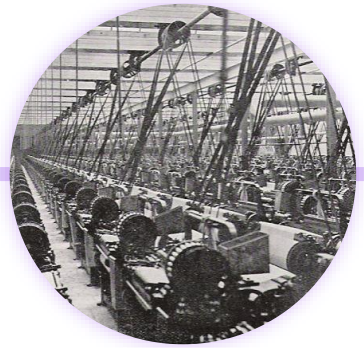
The application of automation **evolves** over time



Humans Invent Innovation

300 BC

Transformed
Time Keeping



Industrial Revolution

1760

Transformed
Energy



Computing Age

1936

Transformed
Information



Era of Artificial Intelligence

Today

Transforming
Knowledge & Action

The new frontier: **Intelligent automation**

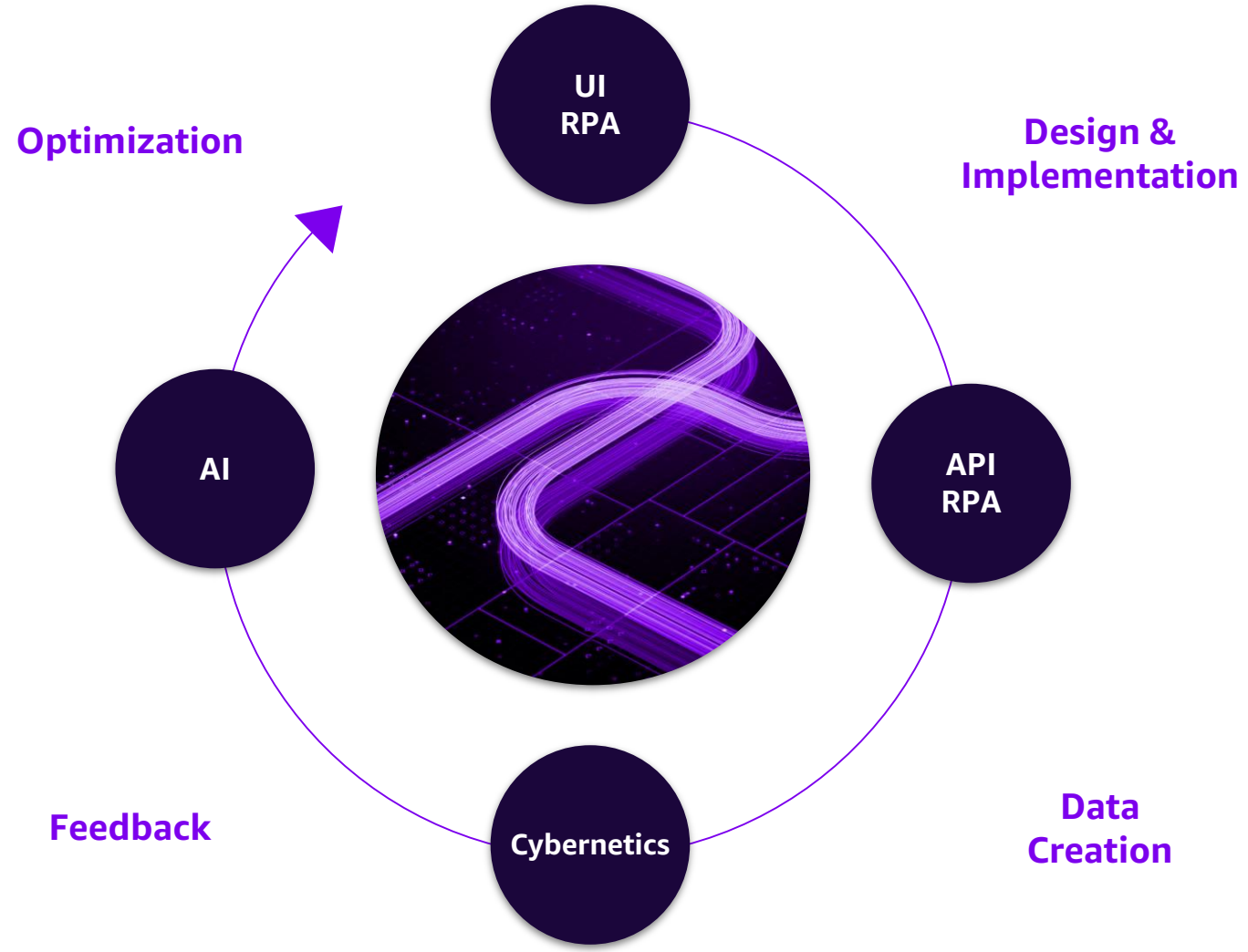
"By 2030, artificial intelligence has the potential to add 16% — or **about $13 trillion** — to the global economy"

McKinsey Global Institute

- **Analyzes massive amounts of unstructured data**: Identifies patterns and automation opportunity
- **Mimics human logic:** Increased use case complexity
- **Learns and recommends:** Proactive automation ideation and implementation



The **Four Technology Pillars** of Intelligent Automation



Healthcare **demands** intelligent automation



Costs continue to skyrocket

$1T+ spent annually on administrative overhead



Degrading patient experience

91% of clinicians say that improving administrative processes is the most urgent need to improve quality of care[1]



Worsening worker burnout

92% of clinicians cite administrative tasks as a major contributor to burnout[1]

[1]Source: A study conducted by Olive and published in the Internet of Healthcare Report in August 2021

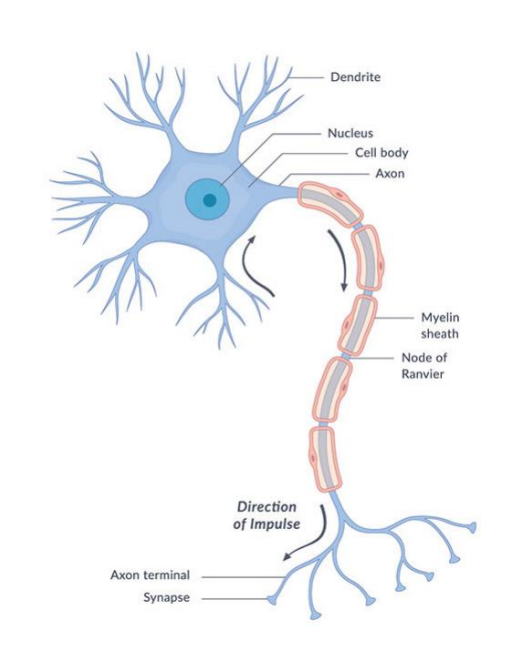
How it works

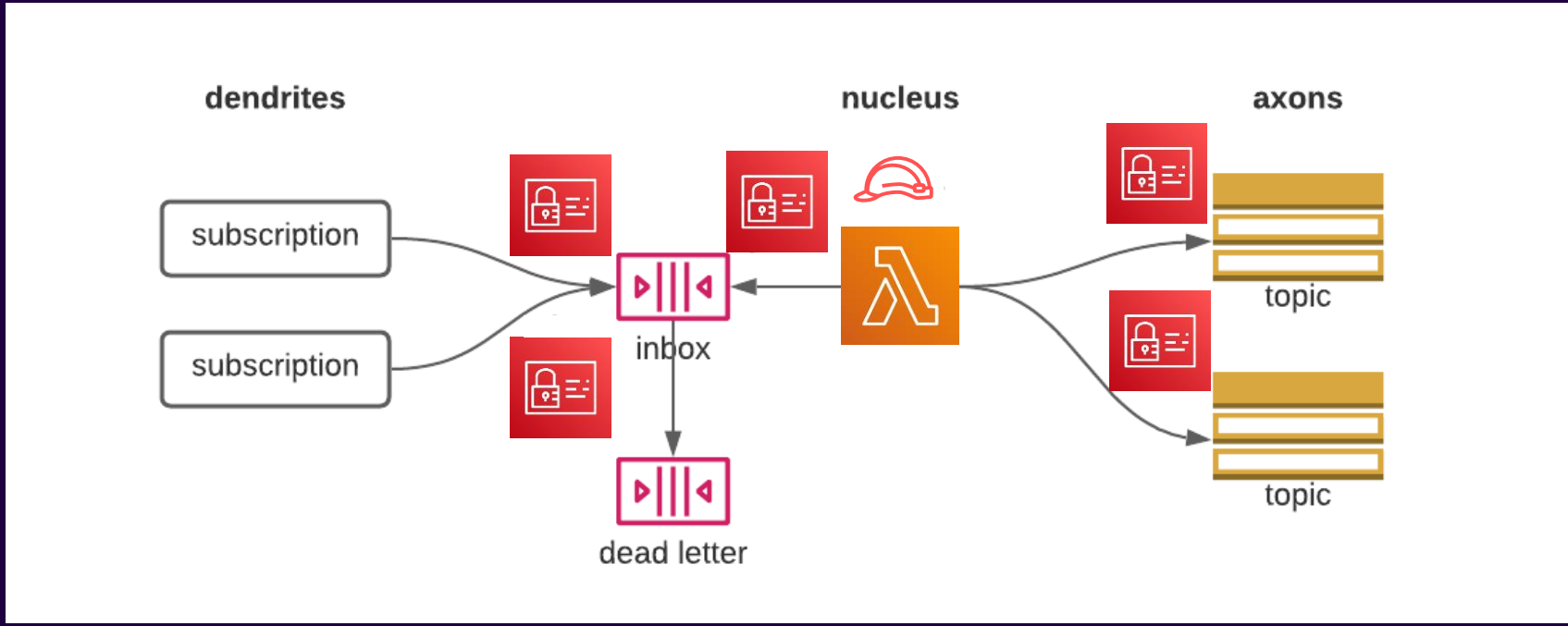


Neuron architecture

- Cloud-native, serverless-biased
- Reactive, asynchronous messaging
- Graph in motion

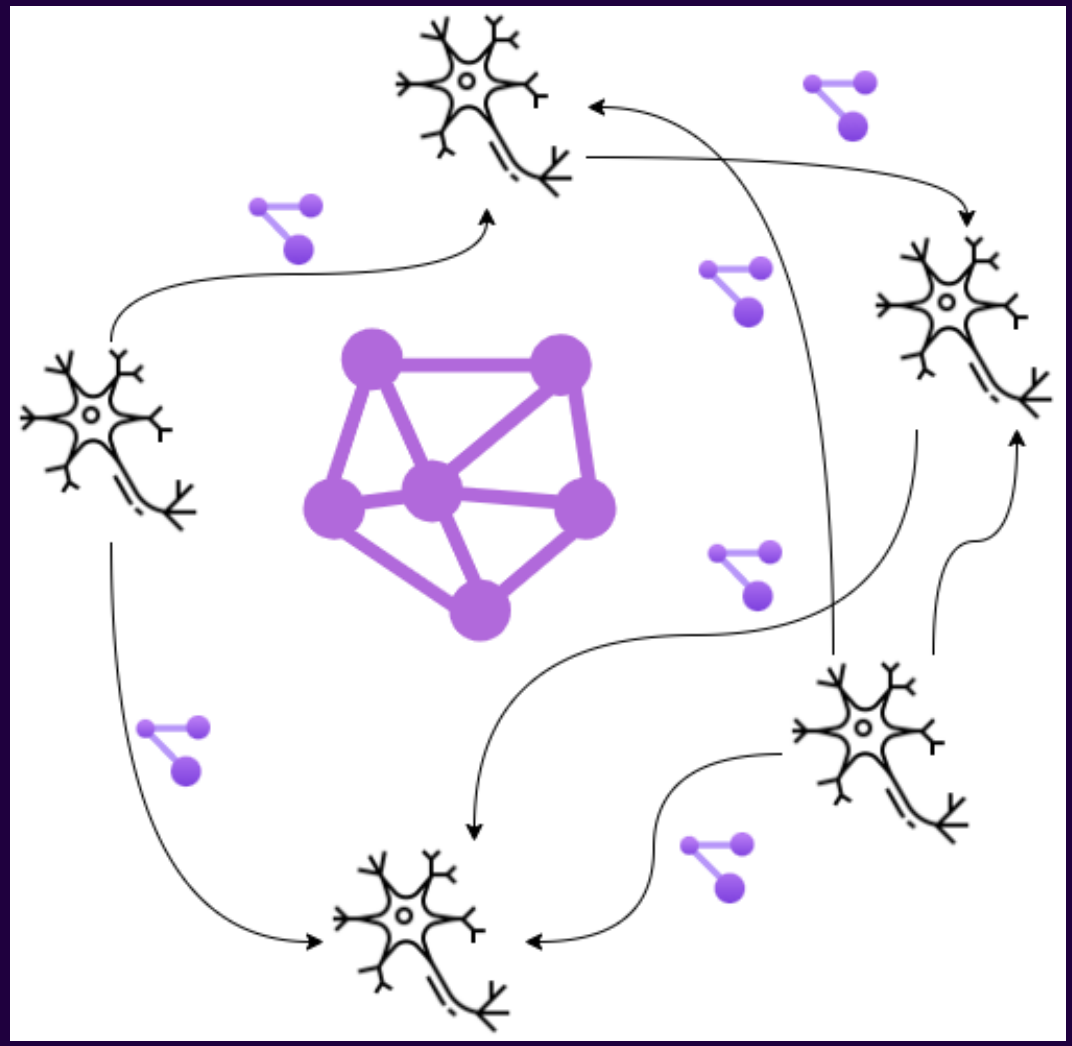
A simple abstraction





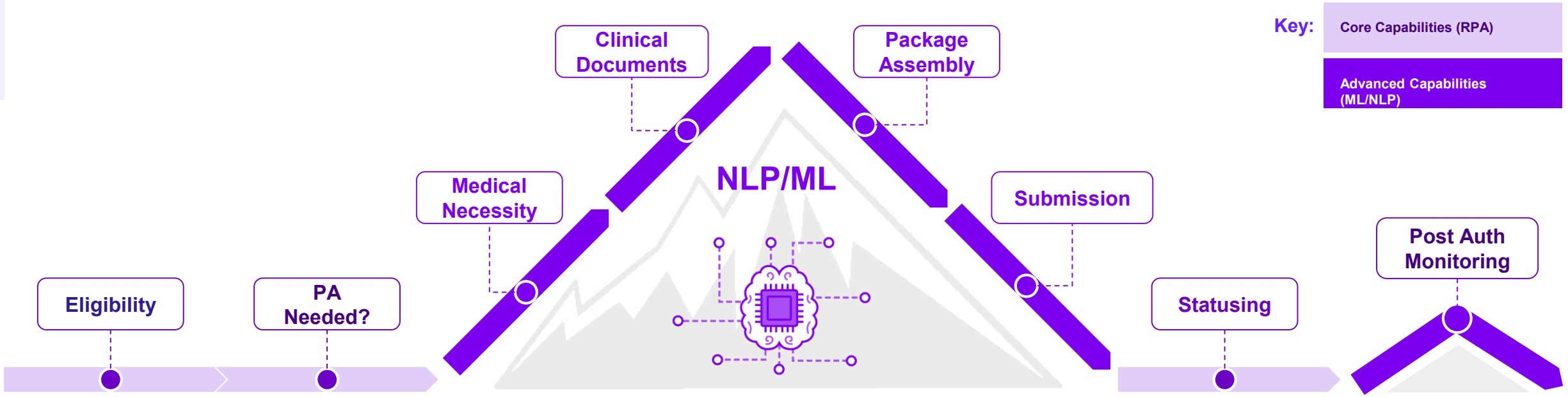
Graph in motion

By constraining message data to be a graph, local neuron data is inherently connected to the full Olive Knowledge Graph



Patient access

Olive leverages advanced automation to relieve the burden of prior authorizations from end to end



Olive retrieves over **40,000 medical necessity rules from national, regional, and state payers** and identifies the clinical requirements and documentation for you

Olive's NLP capabilities analyze previous **13-18 months** of clinical history to recommend the most appropriate supporting documents

Olive's AI engine learns from users' actions, getting **smarter and more accurate** with each submission

Healthcare & Life Sciences Lounge

Join us at our networking lounge every day for post-session speaker meet-and-greets, Ask the Experts, featured topic deep dives, and informal discussions

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Wynn, Level 1

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