



Executive Summary

Machine Knowledge (MK), the next *logical* step beyond Machine Learning

New Sapience is a web-based software platform that profoundly changes the Artificial Intelligence landscape. For more than a decade, AI applications have been based on a single common approach, one that employs training algorithms to find patterns in large databases. This methodology which includes Machine Learning (ML) and Deep Learning is so firmly established that it has become nearly synonymous with AI.

New Sapience takes AI to another level altogether. It has created Machine Knowledge (MK) a technology that lifts computing beyond data and information to endow machines with knowledge. What we call ML today is *neural learning* which results in a skill. MK transforms incoming information, including natural language, into knowledge, mirroring human *cognitive learning*. MK applications can stand alone or be added to existing AI solutions, giving computers a way to comprehend our world so they can help us navigate it.

Company Profile:

URL: www.newsapience.ai
Industry: Artificial Intelligence
Employees: 7
Incorporated: 2015

Contact:

Sean Reineke
sreineke@newsapience.com
301.466.2328

Financial Information:

Funding Stage: Early
Capital Seeking: \$1,000,000
Use of Proceeds: Development, IP,
Marketing

Technology:

Machine Knowledge

Management:

Bryant Cruse, Founder & Chairman
Sean Reineke, CEO
William Bandy, CIPO

Investors:

Founder, Friends & Family, Angels

Machine Knowledge goes beyond Machine Learning, by being able to add explainable results, deterministic logic and genuine comprehension of human language. Finally, millions of frustrated users of today's voice-based interfaces will experience technology that understands what the words mean not just match patterns of text. New Sapience opens the door to the long-awaited revolution in AI where machines have the comprehension to understand what we say, and the general intelligence to do what we tell them.

Problem: Today, AI applications are everywhere and already credited with changing the way we live. But experts agree that Machine Learning and similar approaches based on Artificial Neural Networks have fundamental limitations. They cannot create knowledge or models of the world, they cannot explain their results, have no common sense and, as any user of SIRI, Alexa, etc. can attest, have no comprehension of human language.

Solution: MK applications learn cognitively; building upon what is already known by applying reason and logic to new information. Thus, each instance of our software quickly becomes unique as its world model evolves from the

baseline of the core principles, a method of expanding knowledge unprecedented in software. We call these unique instances “sapiens.”

Our first product, the Patient Support Sapiens (PSS) is a digital companion aimed at alleviating the suffering of people with chronic diseases. It understands what its user says to it, remembers what it’s been told, and will be there 24/7 to manage medication compliance, symptom tracking and the other details that sufferers and caregivers must contend with. The market for this product is huge, 133 million people in the United State alone suffer from chronic illnesses. The PSS is one of several specialized medical sapiens types that comprise the AIRMED reference architecture of communicating sapiens. AIRMED has the potential to revolutionize medicine. Eventually sapiens will be able to perform tasks that today only humans can do. We predict they will be considered the world’s first true AIs. Our goal is to create a Machine Knowledge ecosystem that will be utilized in every smart device; every enterprise that utilizes knowledge workers; every system that would benefit from integrated knowledge and logic; a colossal market.

Product (How it Works): Knowledge is a mental model of reality that allows us to reason about our world. “Knowledge representation” has been a branch of AI for more than 40 years, but those approaches, rule-based expert systems and semantic networks, could never be made to scale beyond the level of narrow applications. What was missing was insight into the nature of knowledge itself, that it has an underlying structure independent of logic or semantics. This structure has been engineered into the core of our patented Machine Knowledge technology enabling for the first time ever, a scalable information structure within a computer that corresponds to abstract knowledge in the human mind.

Key Features: (1) Learning cognitively proceeds by assembling new knowledge from component concepts. Knowledge builds from knowledge but needs a starting point. Our company has developed a methodology and toolkit for development of an initial model that enables a human to describe the core abstract concepts that compose the problem domain. Programming experience not required. (2) A runtime engine that provides deterministic logic to reason about information coming into the system, whether it is telemetry from instrumentation, parameters from a database, or natural human language – sapiens can modify and extend the initial internal model or solve problems.

Revenue Model: (1) We will sell our sapiens product lines as software as a service via a two-tiered subscription plan. (2) We will license our core technology to third parties in all markets supporting their products or for internal use. (3) We will engage in building custom Machine Knowledge applications in selected markets. Non-dilutive revenue at these levels is enough to make the company free-standing and profitable while we advance our core technology toward our first product offering.

Operating Model: New Sapience is a platform company that licenses our software to third parties while using it as the foundation for our own family of products.

Competitive Analysis: While there are apps with text-based interfaces (chatbots, virtual assistants) currently on the market, none of them are comparable to what our sapiens can do. Today New Sapience is in a field of one. We have already received our “core” patent, submitted additional disclosures and are continually expanding our IP portfolio. We will maintain tight control over the core sapiens development and the trade secrets required to effectively develop Machine Knowledge applications. Our market strategy is designed to develop market entry across verticals ahead of those who try to imitate our platform.

Customer Definition: Initially, patient caregivers and health service providers. As our capability rapidly expands beyond medical market to embrace all aspects daily life, the market will include all consumers

that use or have access to any mobile device. On the B2B side businesses and, companies that employ knowledge workers, those that depend on managing large databases, or control and monitor complex data-intensive systems can benefit from using and integrating our system.

Traction: Employees: 7, Product Development: Beta Test phase Q4 2019, First commercial contract signed Q4 2018, first patent awarded 2015. Over \$3 million in capital raised.

“If you invent a breakthrough in artificial intelligence, so machines can learn, that is worth 10 Microsofts.”

Bill Gates