



Revolutionizing Energy Worker Efficiency

Executive Summary

Sia is the natural language processing platform for the energy industry:

- Automatically fill in databases with data buried in unstructured documents (reports, emails, manuals, etc).
- Ask questions in natural language and get back immediate and accurate responses from across these documents.

Why does it matter?

- Sia is solving the large and expensive problem of the inefficient technical decision-making process.
- Employees use Sia to tap relevant knowledge and best practices without relying on subject matter experts.
- “Why is my tool giving me inaccurate gamma spikes?”, “What will happen if the formation has high smectite?”, etc.
- Key answers and complete data sets are found and explored instantly rather than slowly and with great effort.

How does it work?

- Using Sia involves passing it a spreadsheet or else simply speaking or typing into a mobile device or computer.
- Sia employs advanced, industry-grown natural language processing (NLP) to mine the unstructured data.
- It references whatever it has been given access to by the client, regardless of file type.
- Sia deftly navigates unstructured data without the need for anyone to re-sort or re-label the data.

Why is it being adopted?

- Sia is intuitive to use and non-disruptive to existing workflows.
- Sia can function within client digital storage platforms.
- Each application is quick and small scale, allowing for a land-and-expand growth model within clients.
- Engineers, managers, and executives love Sia from pilots with multinational clients.

Decision-Making Inefficiency Problem

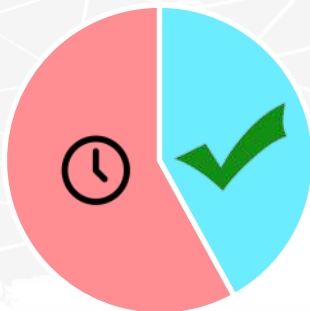
Knowledge workers across all industries spend **30%** of their time looking for information in unstructured documents to research their decisions. That's 2.5 hours every day.

International Data Corporation



In the energy industry, knowledge workers spend **58%** of their time looking for information in unstructured documents to make decisions, or nearly twice the general average.

A survey of 30 energy companies from AIChE and SPE events



Introducing Sia

Your Unstructured Data Management Platform

1. Automatically fill your spreadsheets from documents
2. Answers your questions instantly and accurately



Scan



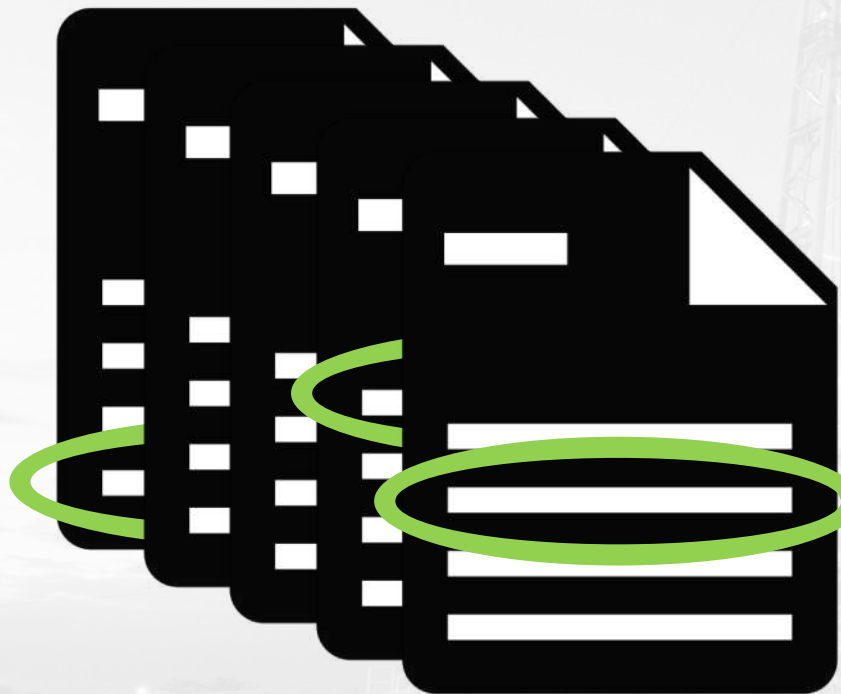
Digitize



Autofill Excel



Advisor



API#	Gamma avail	TVD	Stages	...
2987582746			5	...
9827349862	Y	13,500	10	...
8762365721	N		7	...
9872395826	N	15,230		...
...

- Missing values in spreadsheets are automatically filled.
- Values are linked to their sources for easy reference and confirmation.
- “Runner up” values are also shared.
- Tables from documents can also be automatically ported into Excel.
- Handles Doc, Xlsx, Ppt, Txt, Pdf, etc.



Hey Sia, what's the maximum flow rate a Series F flowmeter can accurately read?







...Series F can measure flow rates up to 50 gpm with error margins of < 1% ...

...The accuracy of the Series F is primarily a function of the length of straight pipe immediately upstream of the meter...

Oh, no wonder this meter is acting up. It's on a bend! Hey Sia, how long of a straight pipe does Series F need for accurate measurements?

How Efficiency Problems Manifest






The typical protocol for researching and resolving issues without Sia

					
Employee finds subject matter expert	SME recalls relevant knowledge products	Relevant knowledge products are found	Issue is resolved via knowledge products	Solution is verified as necessary	Solution is shared with implementer
Portion of total: 6%	5%	51%	28%	5%	5%

From our energy industry focus group research

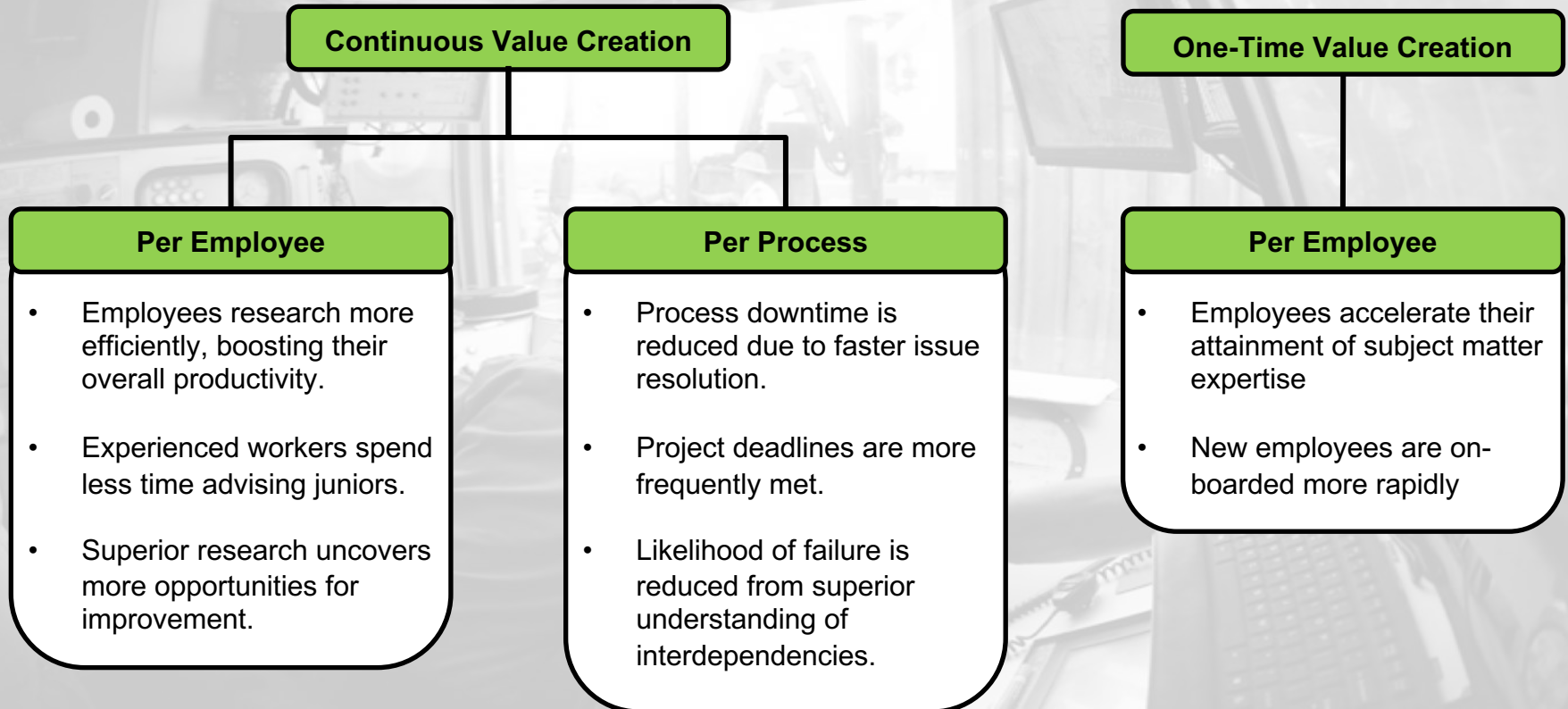
How Sia Resolves the Problems

Sia cuts **~75%** off the process, quadrupling the efficiency as well as freeing up valuable SME time

 <p>Employee asks Sia</p>	 <p>Issue is resolved with more accuracy</p>	 <p>Solution is verified as necessary</p>	 <p>Solution is shared with implementer</p>	 <p>Time freed for other use</p>
Portion of total: ~0%	~15%	~5%	~5%	~75%

From our energy industry focus group research

Value Creation From Sia



Inadequacy of Incumbent Solutions

Traditional Data Organization Projects

Documents are renamed and saved in folder hierarchies to make them more accessible.

OBsolete
The best there was... in the 90's

- Long and arduous to set up and use
- Cannot find relevant parts within a document
(Only lets the researcher explore folders)
- Cannot reference multiple documents at once
(Research almost always spans several documents)
- Prescribes a narrow search philosophy
(For example, file by author or by subject?)

Off-the-Shelf Enterprise Search Tools

Employees enter key words into a search bar and pull up documents featuring those words.

6% Satisfaction rate in energy
FAIL

- Research questions are more complex than mere key words
(For example, unable to filter results to show cause-effect relationships)
- Key words are often very redundant
(For example, a common chemical will return thousands of documents)
- No way to understand what is important to the researcher
(Trained on general end-use consumer data, irrelevant to the user)

The DelfinSia Process



What is an Instance of Sia?

- Each team has its own version of Sia.
- This allows the tool to think and function locally.
- The option exists for users to converse with another team's Sia.

How is Sia Implemented?

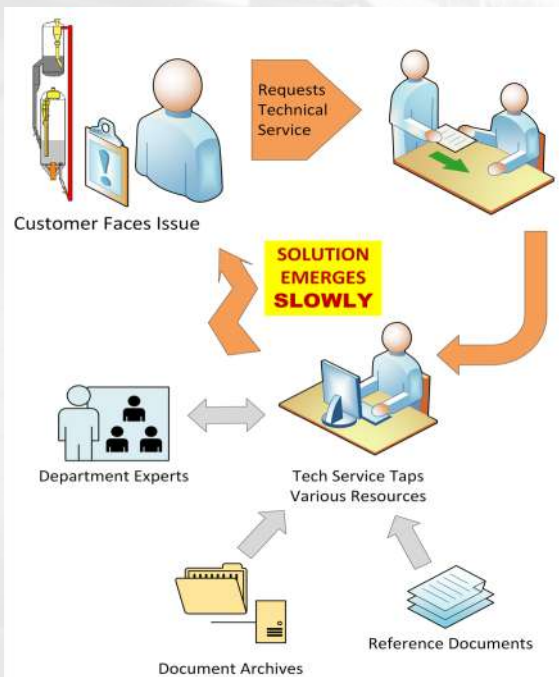
- A manager subscribes online.
- This administrator chooses what unstructured data Sia sees.
- Sia is hosted on client cloud or on DelfinSia's secure Azure servers.

How is Sia Used?

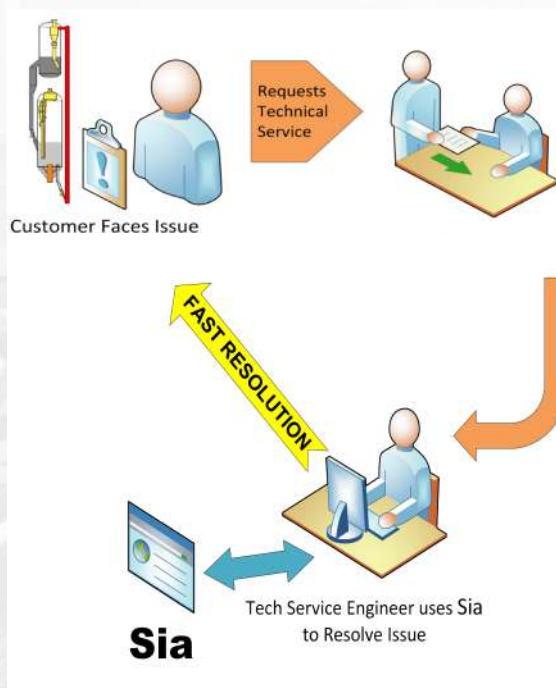
- Sia can immediately answer questions.
- An expert from the team tweaks Sia through ranking and rating Sia's answers.
- The expert decides when to roll the tool out to the general users.

Fluid Catalytic Cracker Case Study

The Challenge



The Process



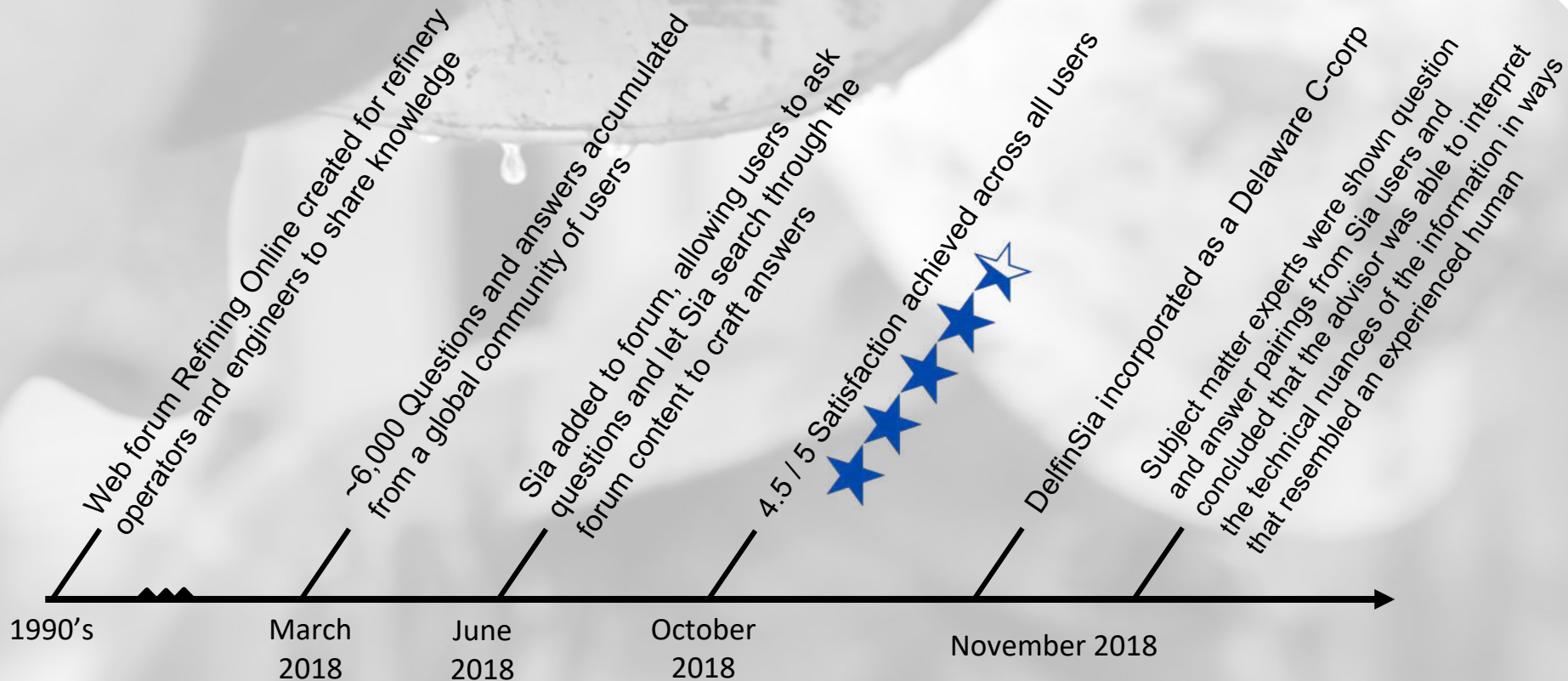
The Outcome

- Adoption spread within the client.
- Efficiency boosts confirmed.
- Users recommend the product.

“Sia helps me solve the problem of being able to search for information within reports which I already know contain that information (but can't remember which report or where in the report).”

- FCC Technical Service Engineer

Public Refining Forum Case Study



The DelfinSia Team



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4 Years Engineering, Shell
2 Years Digital Transformation Consulting
BS Chemical Engineering, Rice University
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7 Years Oil & Gas IOT and data science
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MS Artificial Intelligence, Stanford University



Scott Jacobson – Front End Developer

18 Years Software Design / Development
B Arch., MBA Tulane University

Delfin's July 20, 2019 Traction

- Production with two multinational chemical companies.
- About to start POCs with two oil majors.
- Under discussion with two leading multinational service companies and three independent operators.
- On the radar of several VC and PE firms.
- Can provide references from Shell and BASF.
- Published in PyData, HP, SPE, and AAPG.





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