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# Human Innovation Making Enterprise Ready Answers

PRESENTED BY

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## THE CURRENT CHALLENGE

It is essential for organizations to generate novel ideas of high quality to develop or maintain their competitive advantage.

The ability to leverage novel ideas depends on a company's ability to effectively harness the collective body of technical expertise and knowledge of its employees.

There's an over-reliance to solicit ideas from the same SMEs who are within immediate proximity of the stakeholders social network. Thus ignoring the potential for novel ideas to be generated from the organization at large.

Furthermore, processes, workshops and toolkits used to create and choose ideas are often not based in science or validated.



- Chimera addresses ill-structured problems, that are composed of “disparate” pieces of information, resources, people, etc.
- The method Chimera uses is based in science that has been published and proven to work. *(Dornburg, Adams, Hendrickson & Davidson, 2009)*
- Chimera is a unique capability that leverages human factors expertise to facilitate solution generation
- Chimera uses SMEs to evaluate ideas submitted from across the organization -- not isolated to proximal social networks.

GOALS

1. Leverage the collective intelligence of Sandians across the labs to tackle problems that are too big, or ill-defined, to be solved in isolated effort – “wicked problems”
2. Quickly analyze large volumes of unstructured data and make recommendations for best solutions

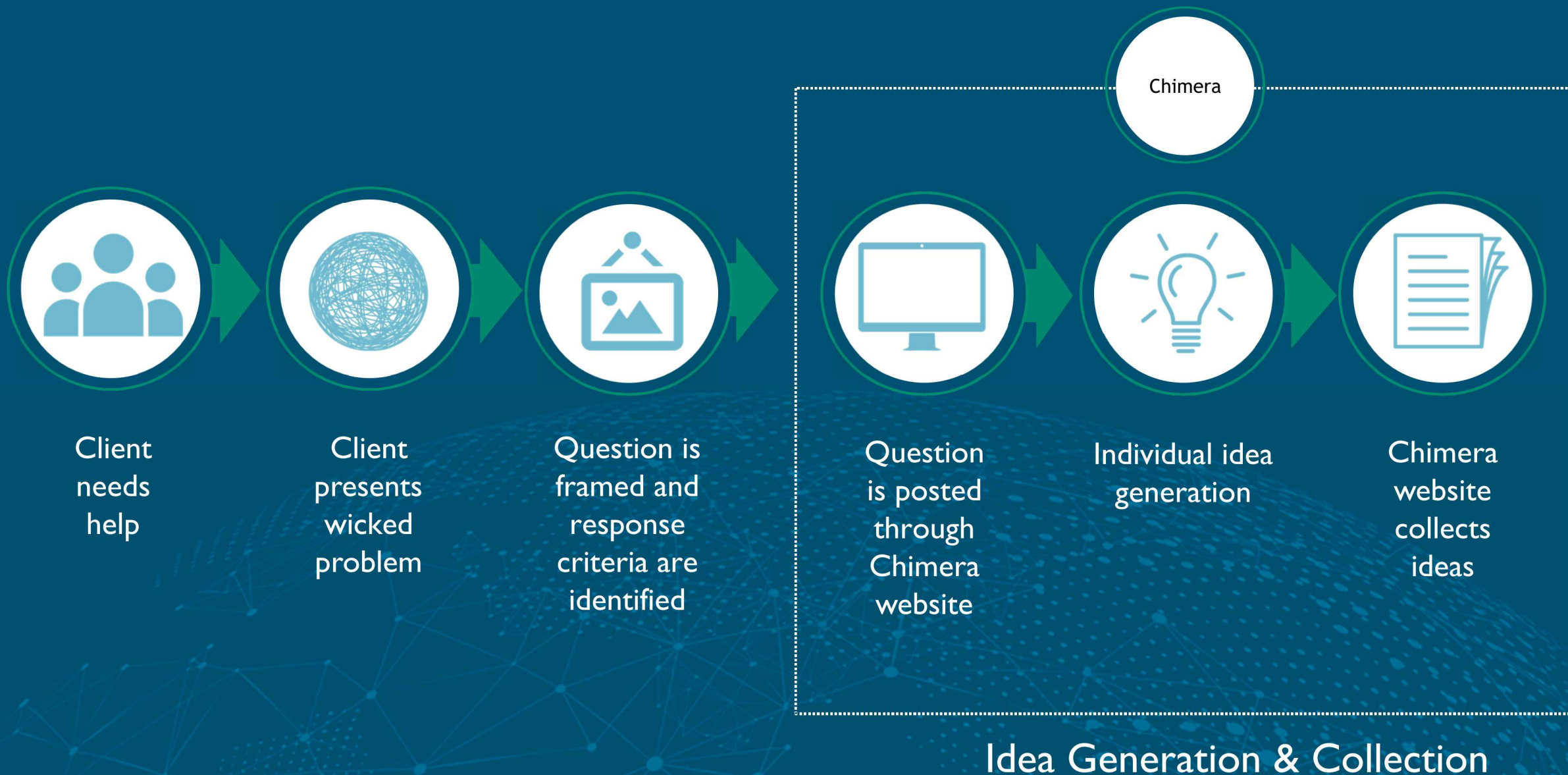
CLIENTS

Anyone at Sandia Labs, especially those in or supporting executive leadership making multi-domain, lab-wide decisions with cross-cutting impact

TYPES OF PROBLEMS

“Wicked problems” in any functional space – technical (NW etc.), enterprise, environmental, operational, workforce, etc.

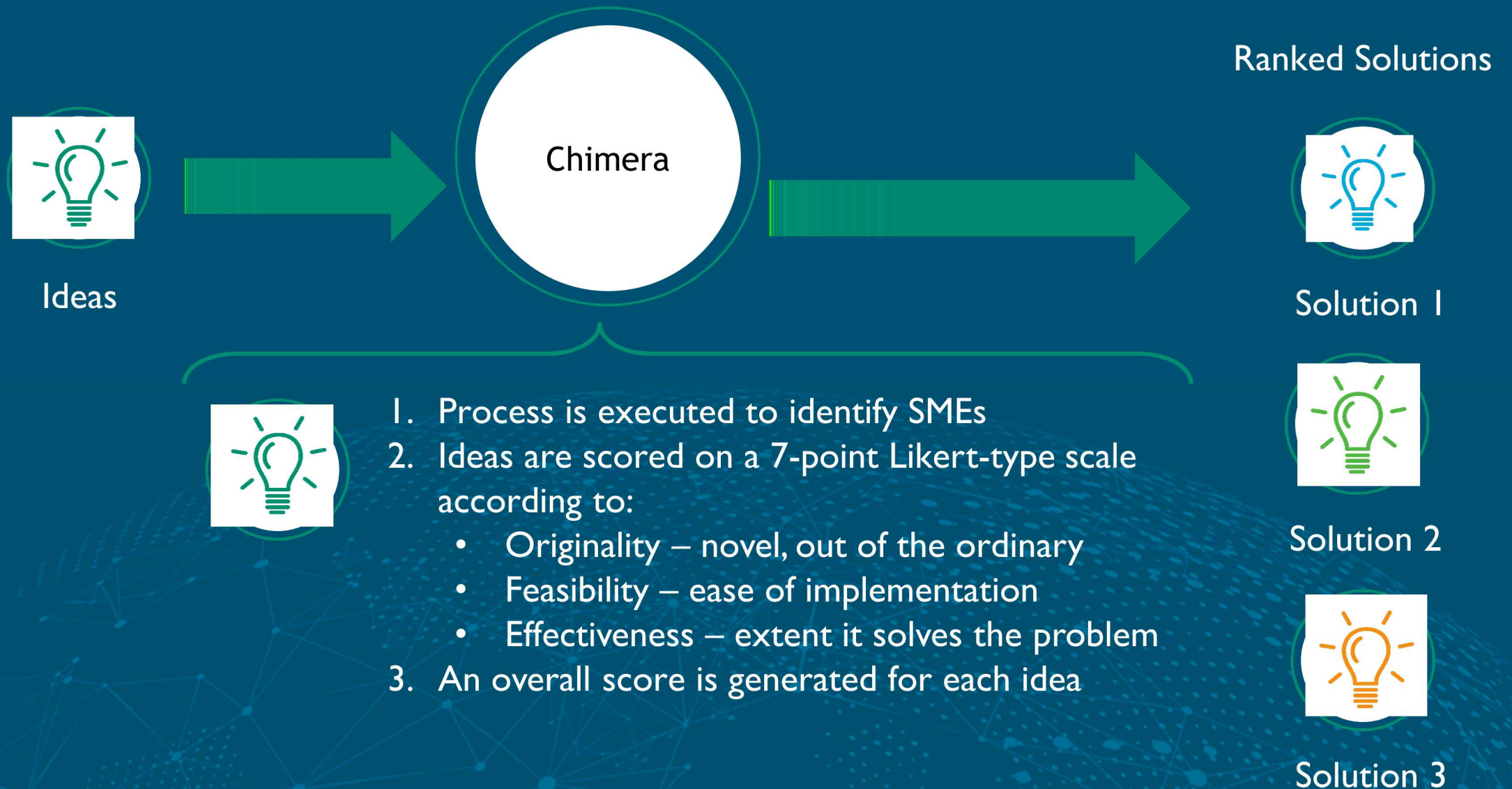
## CHIMERA'S FRONT-END PROCESS





Chimera accepts submissions from individuals and does not allow viewing other of people's ideas.

- Individuals generate more ideas than groups  
(Diehl & Stroebe, 1991; Mullen, Johnson, & Salas, 1991; Levi, 2015).
  - Less social loafing
  - Less fear of judgement (i.e., evaluation apprehension)
  - Less dominate speakers (i.e., production blocking)
- The quality of ideas are greater  
(Wageman, 1995; Dornburg, Adams, Hendrickson & Davidson, 2009)





- Strongest point is that it leverages world-renowned, multi-disciplinary expertise.
- Leverages collective intelligence of all Sandians beyond social networks.
- Proven scientific methodology that yields the highest quality and most meaningful ideas best suited to solve the given problem.

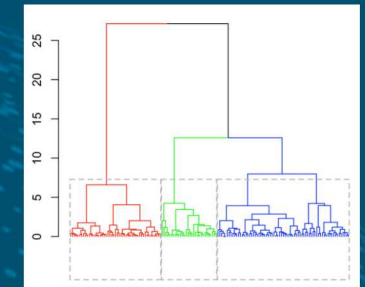
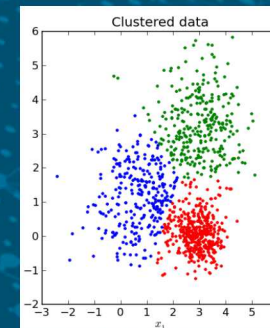
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Leverage text analytics to assist SME reviews

Train Chimera, using machine learning, to identify high quality ideas based on the three dimensions: originality, feasibility, and effectiveness.

Provide quantitative representations of idea similarities and disparities

Allows SMEs to start with a more manageable set of high quality ideas to expedite the process.



2

Create  
“Chimera  
Teams”

Group people based on similar, high-quality ideas.

Further identify teams based on demographic data such as:

- Years in the workforce
- Organizational tenure
- Functional/educational background
- Other variables...

Work with Human Factors “RAIDS” team to start implementation phase



Questions? Comments?

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