

Technology Impact on Ideation and Idea Management

12 May 2016

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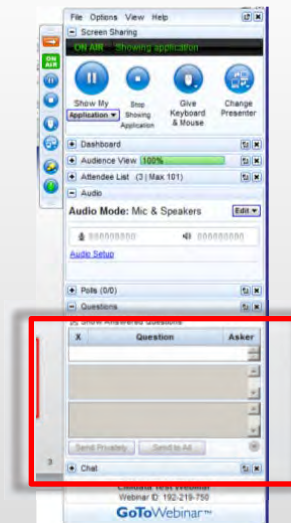
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Questions?

Please use the GoToWebinar Question panel

- Please enter questions in the GoToWebinar Question panel
- We will answer as many questions as time allows...
- Those that can't be answered live will be answered by email



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Our Mission...

Strategic management consulting for competitive advantage in global markets

CIMdata is the leading independent global strategic management consulting and research authority focused exclusively on the PLM market.

We are dedicated to maximizing our clients' ability to design and deliver innovative products and services through the application of PLM.



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About Myself...

Diverse experiences in doing innovation and leading innovation

- 25+ years of experience in technology and product development, innovation management, implementation of strategic innovation capabilities, including modeling and simulation (M&S), open innovation, knowledge management and social technologies, and driving change and adoption through my career at P&G and consulting practice there after
- Worked with or benchmarked best-in-class companies in diverse industries including consumer goods, material suppliers, IT technology, auto, airline, and pharmaceuticals, to source technology and to identify best practices and new approaches for cultivating innovation and innovation productivity
- Education background: Chemical Engineering



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Webinar Outline

- Background – Why today’s topic is important
- Definitions, framework and prerequisites
- How to create better ideas – Lessons learned
- Technology and tools for ideation
- Final thoughts
- Q & A



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Background

Enterprises must reevaluate how they innovate! (1 of 2)

- Acceleration of everything!
 - Networked economy
 - Erosion of traditional boundaries between industries and companies
 - Technology advancements
(Social, Cloud, Sensors, 3D Printing, Inter of Things → Everything)
 - A new era of innovation with connected & smart products
- More than ever innovation is a “must”
- Businesses are desperately seeking better ways to understand, prepare for and manage innovation effectively



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Background

Ideation and idea management are key to innovating effectively (2 of 2)

- To be competitive organizations need to be more innovative and distinctive in their offerings
- To make this happen they need to have systemic practices to
 - *Generate richer ideas to feed their innovation pipeline*
 - *Test and fail ideas faster and more affordably to decide most appealing ones to include in their portfolio*
 - *Solve problems faster*



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Ideation & Idea Management

Definitions

- **Ideation:** Processes and tools to define, capture, manage, and prioritize a set of “ideas” for

- New products and/or services
- Improvement to existing products and/or services
- New technologies and capabilities
- Problem solving during product development

- **Idea Management:** Organizing and updating well-defined ideas aimed at creating “new value” in a database with clear articulation of the value proposition for each idea with supporting evidence

What is a “Good Idea?”

Common characteristics

- Not obvious, but intuitive
- Built around a “customer” need
- Improves customer’s life in a meaningful way
- Can be acted upon
- Create competitive advantage

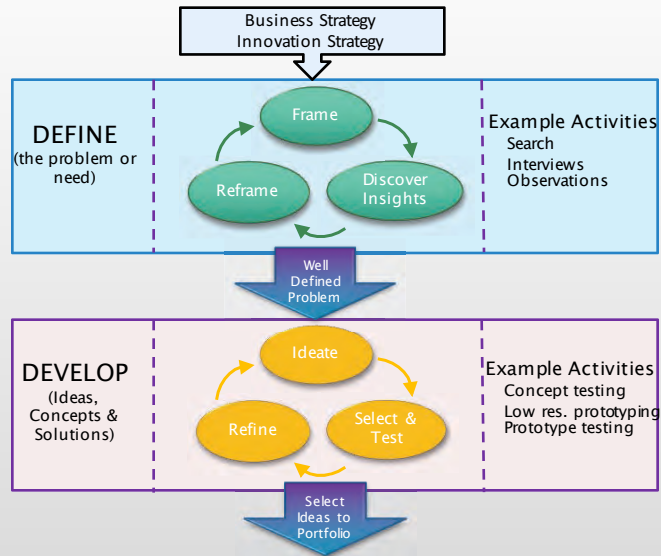


“So advanced, it’s simple”



Ideation Framework

Iteration happens in each phase



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Two Important Prerequisites

For success of ideation and innovation

- **Visible support by top management**
 - Provide strategic goals and resources
 - Engage in establishing decision criteria and decision making
 - Encourage the right culture, e.g., risk taking, experimenting and learning from failure
- **Having an Idea Management Core Team**
 - Reports to top management
 - Orchestrates the ideation process and makes recommendations
 - Have the right mix of creative and divergent, and analytical and convergent thinking styles
 - Have domain/functional expertise diversity, e.g., Marketing, Consumer, Design, Technology, etc.



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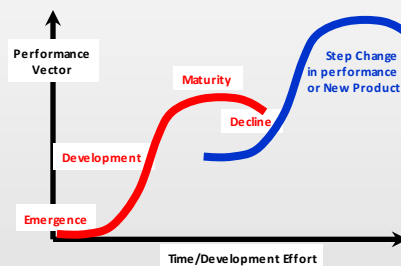
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A Well Defined Need Lead to Better Ideas

"A problem well defined is half solved" – John Dewey

Think about the "BIG PICTURE"

- The type of innovation needed?
 - Minimal change to product and services
 - New commercial / marketing concepts
 - Significantly improved performance of existing products and services
 - New forms & new technology
 - New partnerships
- When the solution is desired?



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Better Questions Lead to Better Ideas

"The art and science of asking questions is the source of all knowledge" – T. Berger

Nike Example:

Insight: People seem to be more motivated and exercise more when they have a personal trainer.

Question: What if sport shoes be more like "personal trainer?"
(instead of - how can we sell more shoes?)



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Quantity Leads to Quality: Generate Lots of Ideas

"I have not failed. I've just found 10,000 ways that won't work" - Thomas A. Edison

- "Ideation" should not live in its own silo
- Do not limit ideation to your core team or organization
- Innovate at the seams by searching and inviting insights and ideas from diverse sources
- Bring external in, i.e., consumers, suppliers, academia, students, etc.

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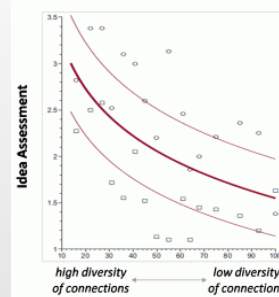
Diversity of Thinking Leads to Better Ideas

"Cannot solve problems with the same thinking that created them" – A. Einstein

- Get inspiration from diverse sources, collect insights and data and landscape around the need

- Ask questions like

- What are customers' need
- What are trends?
- What is the size of the market?
- Who are the players? Where are they playing? What are they doing? How are they doing?
- Do we have a competitive advantage?



Prof. Ron Burt's (University of Chicago) empirical study showing that people with more diverse sources of information generated consistently better ideas
Source: www.innovationexcellence.com



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Early "Build-Test-Fail" Lead to Better Ideas

Fail Early, Fail Fast, Fail Often

An engineering example where early prototyping & testing led to rapid development versus "benchmark" - SpaceShipOne

- Developed by Scaled Composites
- The first non-governmental manned spacecraft (first flight in Aug 2002)
- Scaled Composites was acquired by Northrop Grumman in 2007
(Reason: *Infuse fresh thinking into its military aircraft and space business*)

<https://en.wikipedia.org/wiki/SpaceShipOne>



Aerospace Industry Rethinking How to Build Military Aircraft
<http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=2062>



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A Criteria Based Evaluation Leads to Better Ideas

Collaborative assessment of ideas based on predefined criteria is a must



The New York Times Magazine What Google Learned From Its Quest to Build the Perfect Team

New research reveals surprising truths about why some work groups thrive and others falter.
By CHARLES DUHIGG Illustrations by JAMES GRAHAM
FEB. 25, 2016

'As long as everyone got a chance to talk, the team did well. But if only one person or a small group spoke all the time, the collective intelligence declined.'

Ideation Core Team Responsibilities

- Define the need or question
- **Establish a decision criteria**
- Champion ideation events
- **Evaluate ideas and insights**
- Provide feedback, ask questions
- Make recommendations for next stage evaluation of ideas



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Poll Question

Which best practices are applicable to your ideation process?

- Visible support by top management
- Have a core team to guide the ideation process for portfolio choices
- Align on clear decision criteria upfront
- Include diverse stake holders in the ideation process
- Rapid prototyping and testing to filter ideas



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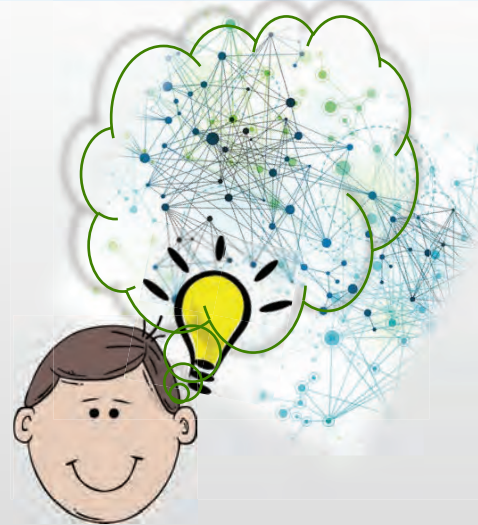


Every Idea is a Network!

We build our new ideas by making new connections in a given context

Our new ideas formed dynamically by connecting new information with concepts already networked in our brains

*Unless we share our ideas or act on them they have no **impact!***



Ref: "Where Good Ideas Come From" by Steven Johnson and TED talk by Chris Anderson: TED's secret to great public speaking



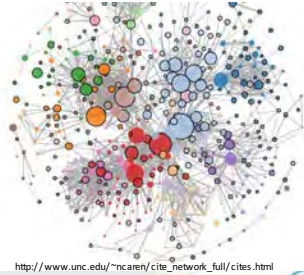
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Publications are Networks of Ideas

References and citations are connectors

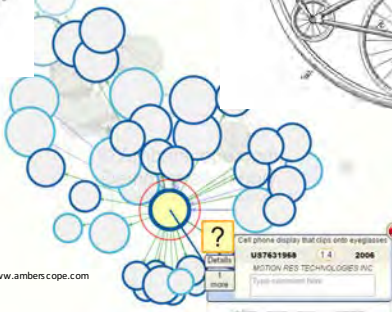
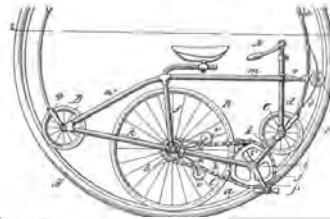
A Sociology Citation Network



http://www.unc.edu/~ncaren/cite_network_full/cites.html

PATENT NETWORKS AND INVENTION BIG DATA

Source: <http://www.wired.com/2015/03/patent-networks-invention-big-data/>



Source: <https://www.ambenscope.com>



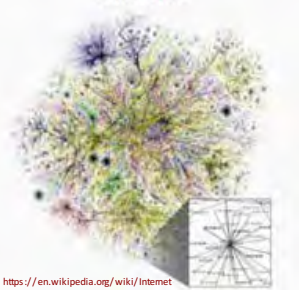
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Internet - Networks of Ideas at Scale

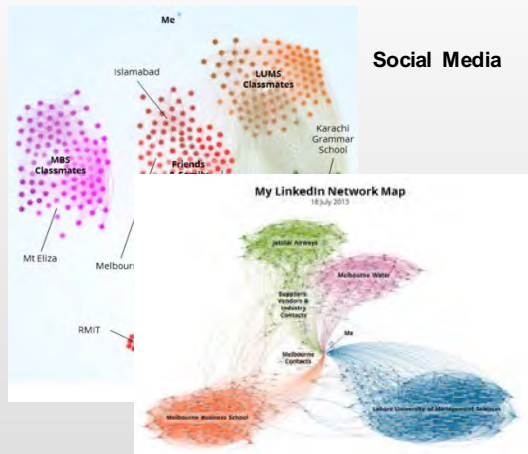
Digital links are connectors

Internet



Source: <https://en.wikipedia.org/wiki/Internet>

Social Media



Source: <http://insanityworks.org/randomtangent/2013/7/18/mapping-my-social-networks-facebook-linkedin>



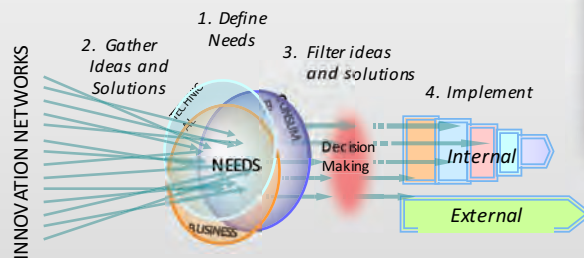
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Open Innovation as Business Strategy

Now widely adopted

- Started in early 2000
- New practices based on network theories and management
- New partnership models



Typical Process



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Corporate Websites to Receive External Ideas

Examples: GE, BASF, and Campbell's



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Scouting Services to Receive External Ideas

Examples: Innocentive, NineSigma and MindSumo

The screenshot displays three examples of scouting services: Innocentive, NineSigma, and MindSumo. The Innocentive interface shows a challenge titled "HIGH PRECISION AN...". The NineSigma interface shows a challenge titled "Solidify the future of crowdfunded life insurance". The MindSumo interface shows a challenge titled "Solidify the future of crowdfunded life insurance". The slide also includes the CIMdata logo and copyright information.

Technologies for Ideation

Enterprises has to enable efficiencies and scale through technology

- Search, alerts and recommendations
- Crowdsourcing and collaborative ideation platforms
- 3D Printing, rapid prototyping
 - Co-creation
 - Makers movement

“ Our machines should be nothing more than tools for extending the powers of the human beings who use them. ”

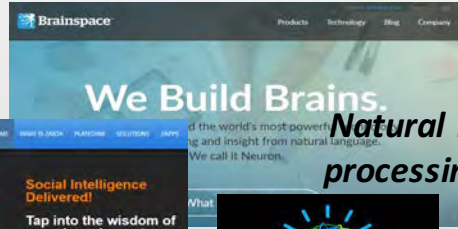
Thomas Watson Jr.

The screenshot displays the CIMdata logo and copyright information.

Search, Alerts and Recommendations

Getting inspiration and finding insights from explicit knowledge

- Ability to search across variety of data sources & networks
- Dynamic visualization of search results
- Collaborative curation of search results
- Ability to collect content, insights and links as you explore



Natural language processing and AI



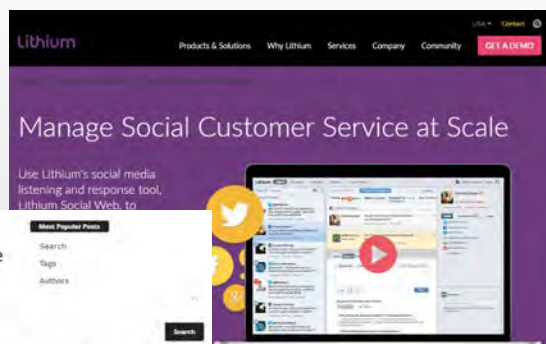
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Customer engagement

Getting inspiration from customers

- Customer support
- Social listening
- Campaigns
- Gamification



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External Crowdsourcing

Examples from the auto industry: Ideation as well as marketing!

Volkswagen Hover Concept Car was one of three based on more than 119,000 ideas submitted to the project website. The website received over 35.6 million views, nearly 13 million visitors



Fiat Mio Concept Car created based on more than 11,000 ideas submitted by 17,000 subscribers in more than 120 countries



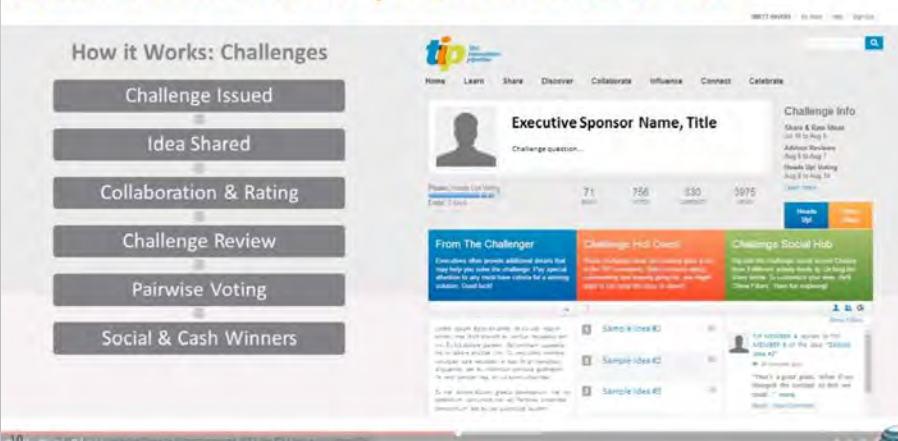
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Enterprise Ideation Example

AT&T crowdsources ideas from employees and consumers (1 of 2)

Members Can Solve a Specific Business Need...



(Image: Courtesy of MindJet Spigit)



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Enterprise Ideation Example

AT&T crowdsources ideas from employees and consumers (2 of 2)

(Image: Courtesy of MindJet Spigit)

Collaborative Ideation Solutions

New solution and service providers arise alongside with established

Select providers

- Batterii (Design Thinking)
- Brightidea
- e-Zassi
- Exago
- Hunchbuzz
- Hype
- Spigit
- Sopheon Idea Lab



Collaborative Ideation Solutions

Typical features that are combined with unique value propositions

- Support many of the ideation “lessons learned”
- Generally cloud based, SaaS
- Dashboard / Landing Page
- Provide workflow guidance
- Templated idea submission
- Idea evaluation with rating and comments
- Community building, gaming, awards, credits
- Analytics & idea advancement



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Batterii

Guided by Design Thinking Approach

Collaborate
on ideas &
insights

Rooms



Capture
observations
& inspiration
on the go

Missions



Organize &
Synthesize data
Reveal the story

Walls



(Image: Courtesy of Batterii)



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e-Zassi

External ideas received with min IP and regulatory risks

Technology Q&A Mitral Valve Repair Device Assessment Progress

Nature of Innovation

Let's determine if the innovation is a medical product, computer software or a platform technology. Please review the following:

- 1. The innovation is a medical product (once fully developed)
- 2. The innovation is a Computer that will be used by all companies
- 3. The innovation is a Software that will be used by other medical manufacturer companies
- 4. The innovation is a Technology Platform Technology (software and may include hardware or material)
- 5. Other

Owner: Agent/s: Donna See
 Inventor/s: Devin Herskowitz
 Management: Volodymyr Nikolenko

Date Generated: October 14, 2013
 Non-Confidential

Mitral Valve Repair Device

The following information resulted from the analysis of this innovation by the e-Zassi™ Technology Assessment Software Platform. The Mitral Valve Repair Device is a medical device used in the cardiovascular surgery segment of the cardiovascular market. It is designed for long-term use or permanent implantation. It is expected to be used in the hospital (inpatient department) by a surgeon. Improved procedural efficiency are expected as a result of using the Mitral Valve Repair Device.

Nature of Technology – Summary Table		
Type of Device:	Medical Device	Learn more
Device Regulatory Classification:	US: Not Identified EU: Class III	Learn more
Regulatory Status:	US: A regulatory submission is required, but not yet filed EU: A regulatory filing is required but has not been submitted	Learn more
Primary Intended Use:	Treatment	Learn more
Primary and Secondary Users:	Surgeon	Learn more
Key Purchasing Decision Maker:	Surgeon	Learn more

Automated Reports

(Images: Courtesy of e-Zassi)



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Exago (originated from Portugal)

Idea selection process driven by proprietary prediction markets algorithm

More efficiency and process improvement

Challenges

User activity

My Wallet

My Investments

Evolution

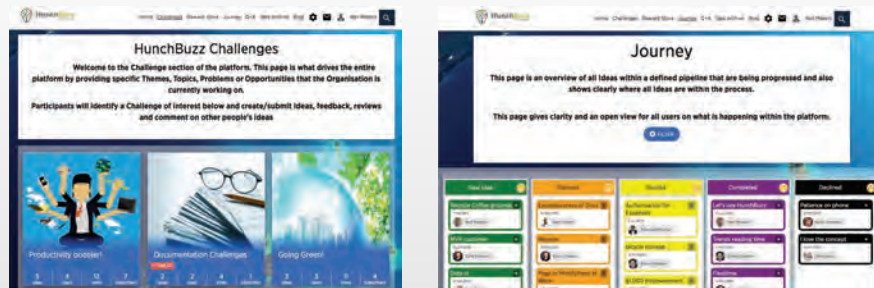
(Images: Courtesy of Exago)



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HunchBuzz (originated from New Zealand)

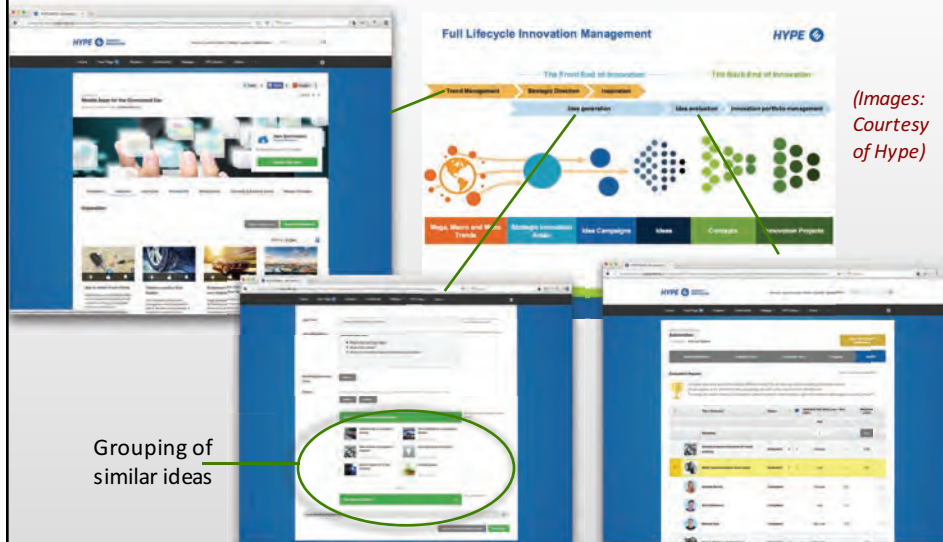
Targeting small-medium size enterprises for internal collaboration



(Images: Courtesy of HunchBuzz)

Hype (originated from Germany)

Trends as inspiration at the front end & strategic idea evaluation at the back end



(Images: Courtesy of Hype)

Sopheon's Accolade for Idea Development

Ideation seamlessly connects with strategic portfolio management



(Image: Courtesy of Sopheon)

Poll Question

Which type of approaches and tools do you use in your ideation?

- Have a structured Open Innovation initiative
- Use digital crowdsourcing ideation platforms to engage employees
- Use digital crowdsourcing ideation platforms to engage customers
- Have a dedicated facility for customer engagement
- Have dedicated facility for rapid prototyping and testing

Technology and Tools alone not the Answer

Need to nurture a collaborative innovation culture with systemic processes

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FirstBuild by GE Appliances

An example of aligning people, culture, process and tools

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A Few Final Thoughts

- Ideation and idea management is a balance of creative divergence and criteria based convergence
- Lesson learned are applicable to people to people ideation activities as well as to digital approaches
- Enterprises have to consider digital approaches to create scale and efficiencies in their idea management process
- Need to align tools and technology choices with strategy and culture



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Join the conversation at CIMdata Workshop

May 25, 2016 | The Biltmore Inn & Suites, Santa Clara, CA

Where do “Good Ideas” come from? - *Strategies and tools to innovate better, and grow faster and more efficiently in today's connected economy*

Agenda highlights:

- Collaborative Forecasting Games: A Crowd's View of the Future
Presenter: **Sean Ness, Institute For the Future**
- Convening Brilliance and Redefining What's Possible
Presenter: **Dyan Finkhousen, Director of Open Innovation & Advanced Manufacturing, GE**
- Design Thinking in Medical Device Innovation
Presenter: **Mary Beth Privitera, Director, Medical Device Innovation and Entrepreneurship Program, University of Cincinnati**
- Make PLM Your Enterprise-Wide Collective Intelligence Platform
Presenters: **Gary Markovits, Co-founder & CEO, Innovation Business Partners**
- **Panel discussion** with our presenters, and executives from Google, Aras and Spigit



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For More Information, Contact...

We look forward to hearing from you

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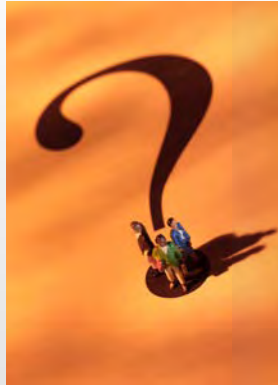


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Q&A

Let's hear what's on your mind?



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