

# From ideation to implementation: A case study in translating advances in research into industry-friendly outcomes

**Jennifer Boger**, PhD PEng  
Systems Design Engineering  
University of Waterloo

**Srusht Dastan**  
Office of Research  
University of Waterloo





CARE-RATE is an interactive system that can help you find information you need.

**What can I help you with today?**

I need a bit of break from caring for dad. What can I do?

Search

This project is supported by:



Need help? Contact us!



Let me refine the results for you

Are you looking for a forum/social site?

Yes

No

Are you looking to connect with other caregivers?

Yes

No

Are you looking for events?

Yes

No

*Here is what I found:*

## Need a Break From Caregiving? How to Find Respite Care ...

### AGING CARE

<https://www.agingcare.com/articles/need-break-from-caregiving-how-to-find-respite-care-137714.htm>

Consider giving yourself the gift of respite, or rest, temporarily, from your caregiving duties. If you are able to manage it financially, many senior living facilities offer short term care for an elder so that family caregivers can take a break, get away, or just have freedom from the responsibility for a bit. Often, the senior living ...

## Family Conflicts Over Elder Care

### A PLACE FOR MOM

<https://www.aplaceformom.com/blog/when-siblings-clash-about-parents-care/>

Jul 5, 2017 ... When one sibling shoulders a disproportionate burden of Dad or Mom's care, that sense of unfairness can foster resentment. Often, by virtue of distance, the siblings who live further away are "off the hook" when it comes to caring for an aging parent, while the nearest siblings are obliged to take on a ...

## How to Cope with the 7 Deadly Emotions of Caregiving

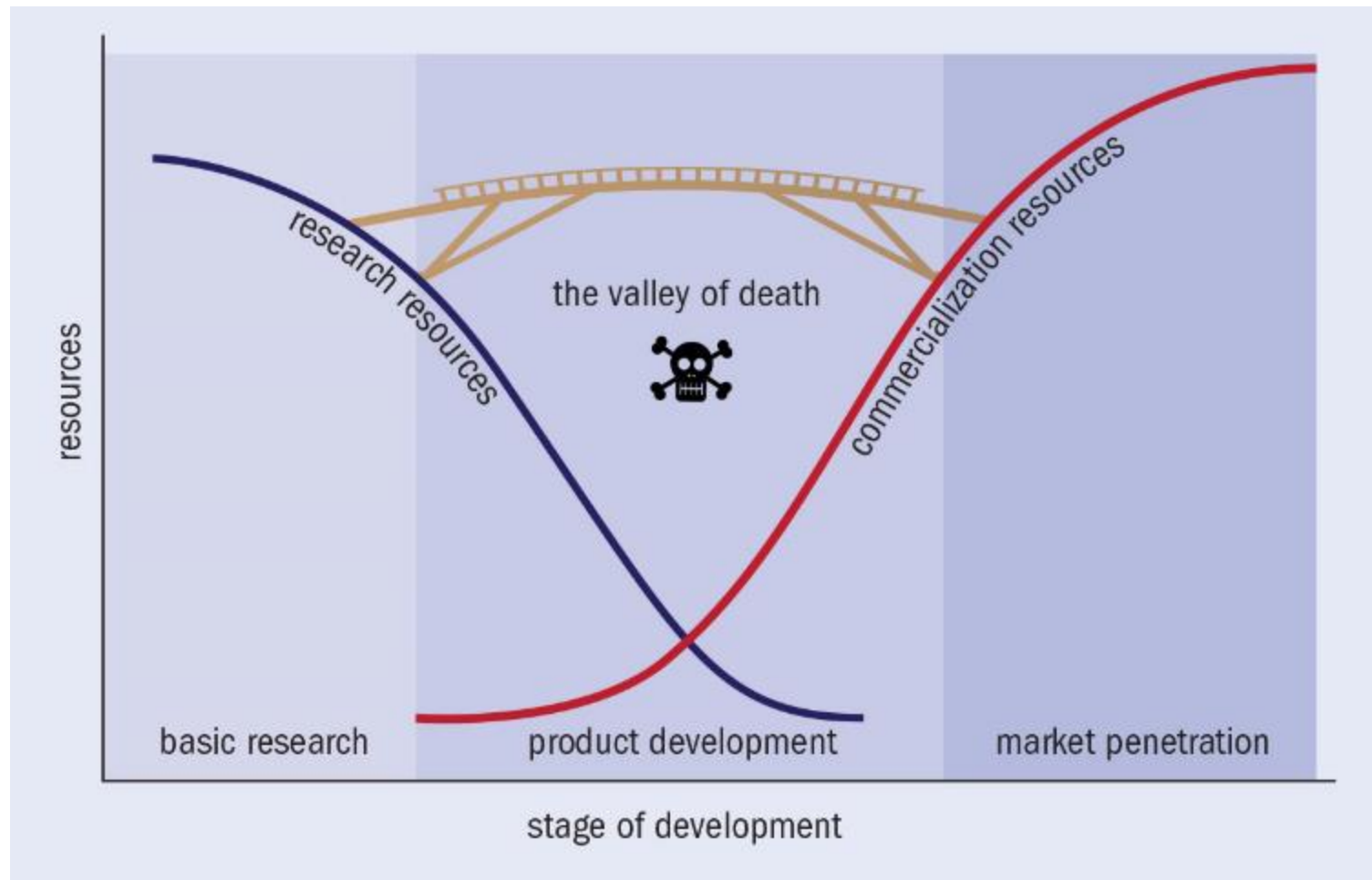
### CARING.COM

<https://www.caring.com/articles/7-deadly-emotions-of-caregiving>

How guilt, resentment, and other powerful feelings can raise your stress and sap your energy -- and what you can do to avoid the damage. Find out ... I ought to visit every day. ... What you can do: Lower your standards from ideal to real; aim

# **The commercialization opportunity:**

Novel use of machine learning/AI to more efficiently search and filter results of large data systems



# Our three biggest hurdles

1. Multi-institution IP
2. Identifying market potential
3. Creating an industry-friendly product

# 1. Multi-institution IP

This project is supported by:



**IP sharing agreements**



# 1. Multi-institution IP - TIPS

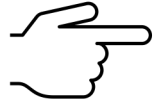
- Get your commercialisation office involved (very) early
- Carefully document who works on what, when they do the work, and how much they contribute to the project
- Contingency planning
- Be very patient



## 2. Identifying market potential



**What is valuable to industry?**



**Why?**

## 2. Identifying market potential -TIPS

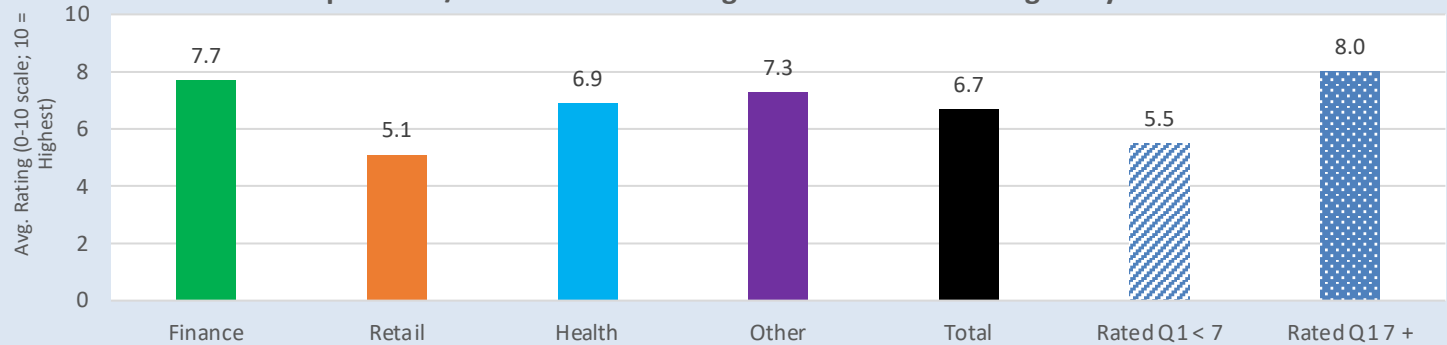
- Get commercialisation office involved
- Leverage funding and expertise
  - NSERC I2I Grant funded a market assessment and report by a 3<sup>rd</sup> party consulting firm

**Adventus**  
RESEARCH+CONSULTING INC.

**Market Assessment of a  
Dialog & AI-Based  
Search Engine System**

**RFQ#20-008**

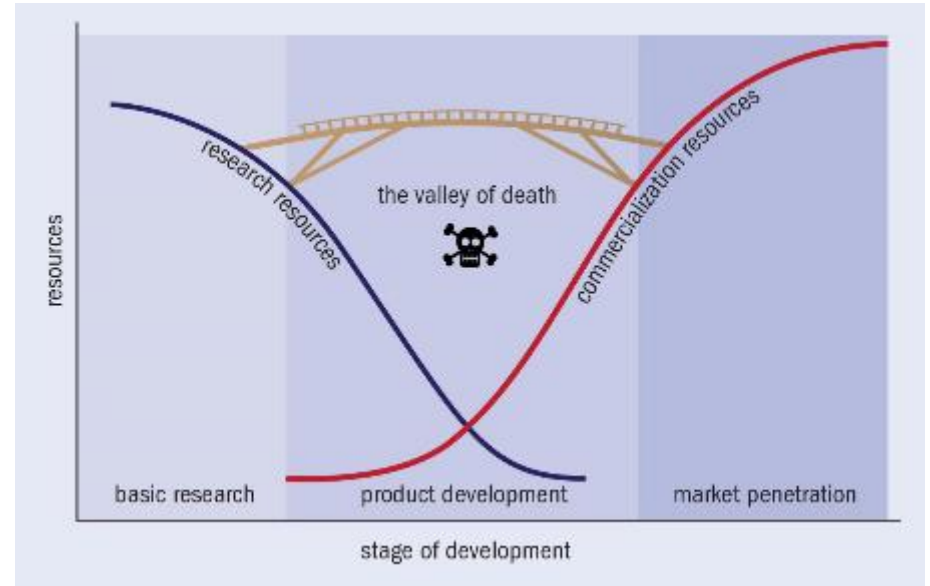
## Importance/Interest in the Dialog & AI Based Search Engine System



Organization	Advantage Importance Rating and Abridged Comments			
	A) Better Search Results	B) User gains better understanding of their search	C) Learns "meta-data"	D) Semi-supervised learning
<b>Financial Services</b>				
<b>Can. Bankers Assoc.</b>				
<b>Canadian Bank</b>	7 – how determine who should do "pruning"	9 – key because user gets better	5 – meta-data on most sites of ten a "mess"	8 – what defines similar contexts?
<b>Concentra Bank</b>	5 – all the consumer would care about	7 – customer will ask better questions and be more efficient in other channels	7 – as a company this helps me scale and understand how fast we can go	5 – I <u>don't</u> care about this if I am a consumer
<b>Independent Consultant</b>	10 – full marks but need to define "better" results	2 – people are lazy and <u>don't</u> want to learn	2 – meta-data may not exist or is not well done	2 – sounds like a feedback loop, users <u>won't</u> do it
<b>Marsh Canada</b>	8 – really important end result for us	9 – extremely important, building websites to	6 – meta-data and filtering not as important as AI	6 – <u>don't</u> think those answered truthfully: click

### 3. Industry-friendly product

Industry needs to feel confident in investing in building the “valley of death” bridge



### 3. Industry-friendly product - TIPS

- Need to have a “demo” that industry can use to assess its applicability to their use case
- Leverage funding to take idea through TRL stages
- Having an industry partner helps with securing funding and project scope

## 3 things that need to change

1. IP protection processes for multi-institution research that makes it simpler for the institutions as well as the researchers.

## 3 things that need to change

2. Planning for required talent and recognizing that after the research is complete different talent is required to support the process of commercializing promising technologies

# 3 things that need to change

3. Academic model needs to better support the commercialization process

**Faculty members / HQP  
recognised, supported, and rewarded**

+

**Support to fill in gaps in the  
commercialization process**



# Thank you

Jennifer Boger  
[jboger@uwaterloo.ca](mailto:jboger@uwaterloo.ca)



Srusht Dastan  
[sdastan@uwaterloo.ca](mailto:sdastan@uwaterloo.ca)

