



# **Measuring Data Value Creation: Steering by the Wake, or Foresight?**

**UW CISA Data Value Creation Workshop  
February 4, 2021**

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# Presentation Overview



*Draft for discussion during the workshop only  
- Do Not Distribute*

What Is Your Data Worth? Insights for CPAs

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February 4, 2021*

Michel Girard, PhD  
Michael Lionais, CPA, CMA  
Rob McLean, FCPA, FCA

- CPA Canada Foresight transformation
- Measuring Value Creation: Four Formative Insights
- Data Value Creation: Perspectives and Concepts
- Value Streams from Data
- “Economic Value” of Data
- Theo’s questions
- “Accounting” for Data Value
- Steering by the Wake, or Foresight?

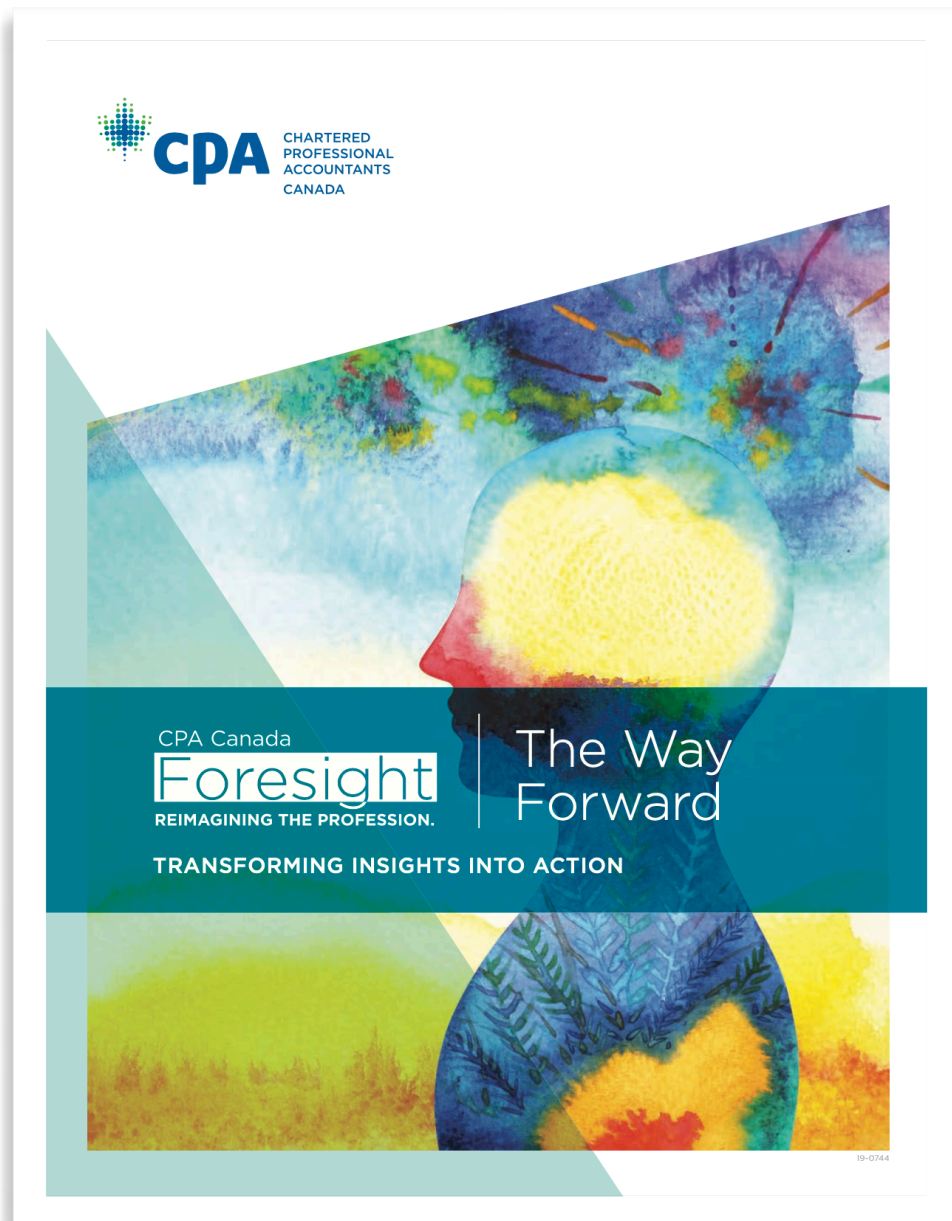
# CPA Canada Foresight Transformation

## Value Creation Workstream

- Initial strategic focus on decisions and measurement: enabling CPAs to play a stronger role in VC decisions
  - Global VC Solutions Directory
  - VC Primer, Publications on VC measurement
  - VC Competencies Framework, to be embedded in CM2.0
  - Upcoming VC webinars, etc.
  - Ongoing thought leadership on forward-looking VC measurement and reporting

## Data Governance Workstream

- Actively publishing guidance through Mastering Data series



**“The time for transformation is now”**

# Measuring Value Creation: Four formative insights

**1993-1997**



**Bill Swirsky**  
CICA innovator,  
photographer,  
world traveller,  
UW CISA  
Board Chair

~~How do  
we get  
Intellectual  
Capital  
onto the  
balance  
sheet?~~

**Wrong  
answer to  
the wrong  
question**

**1998**

How can  
we measure  
the  
creation of  
value?

**Right question**



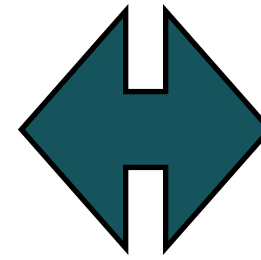
# 1998-2001: CICA Total Value Creation Project



**Rod Anderson**  
**Clarkson Gordon**  
 Executive Partner,  
 audit methodology guru,  
 poet,  
 musician

Value  
*realization*  
 paradigm

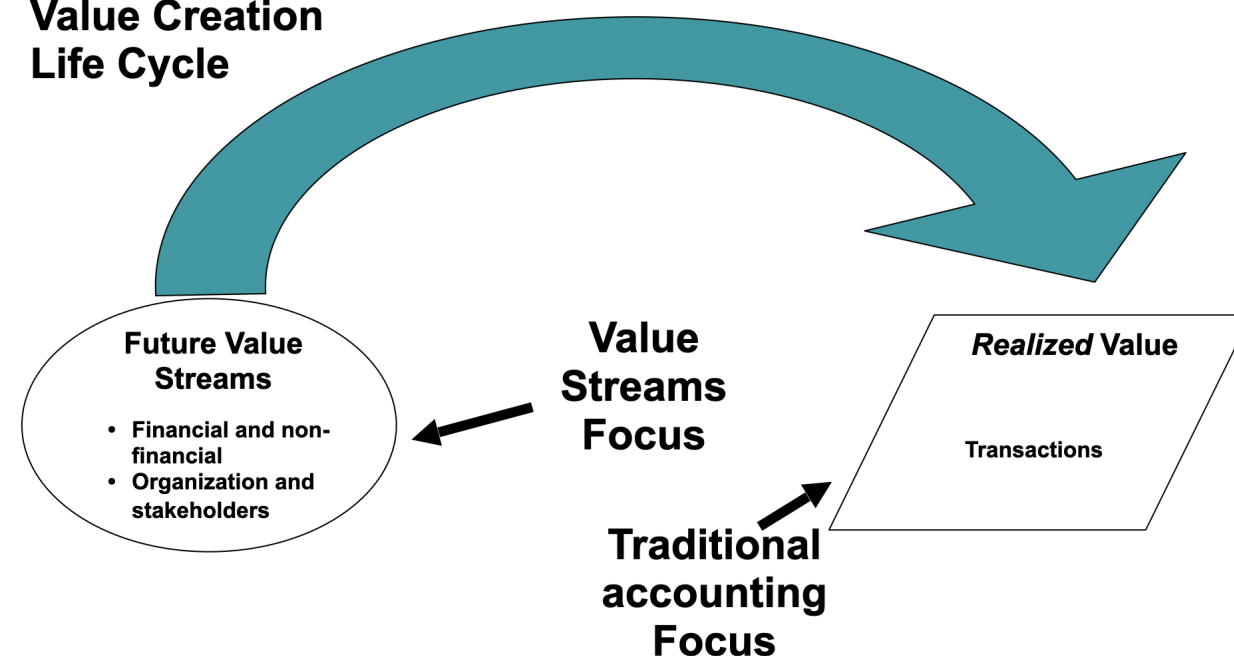
- backward-looking
- transaction-centric: measures value realized based principally on transactions



Value  
*creation*  
 paradigm

- forward-looking
- models future value streams based on today's activities and future events and related assumptions
- financial and non-financial
- organization and stakeholder perspectives

Value Creation  
 Life Cycle

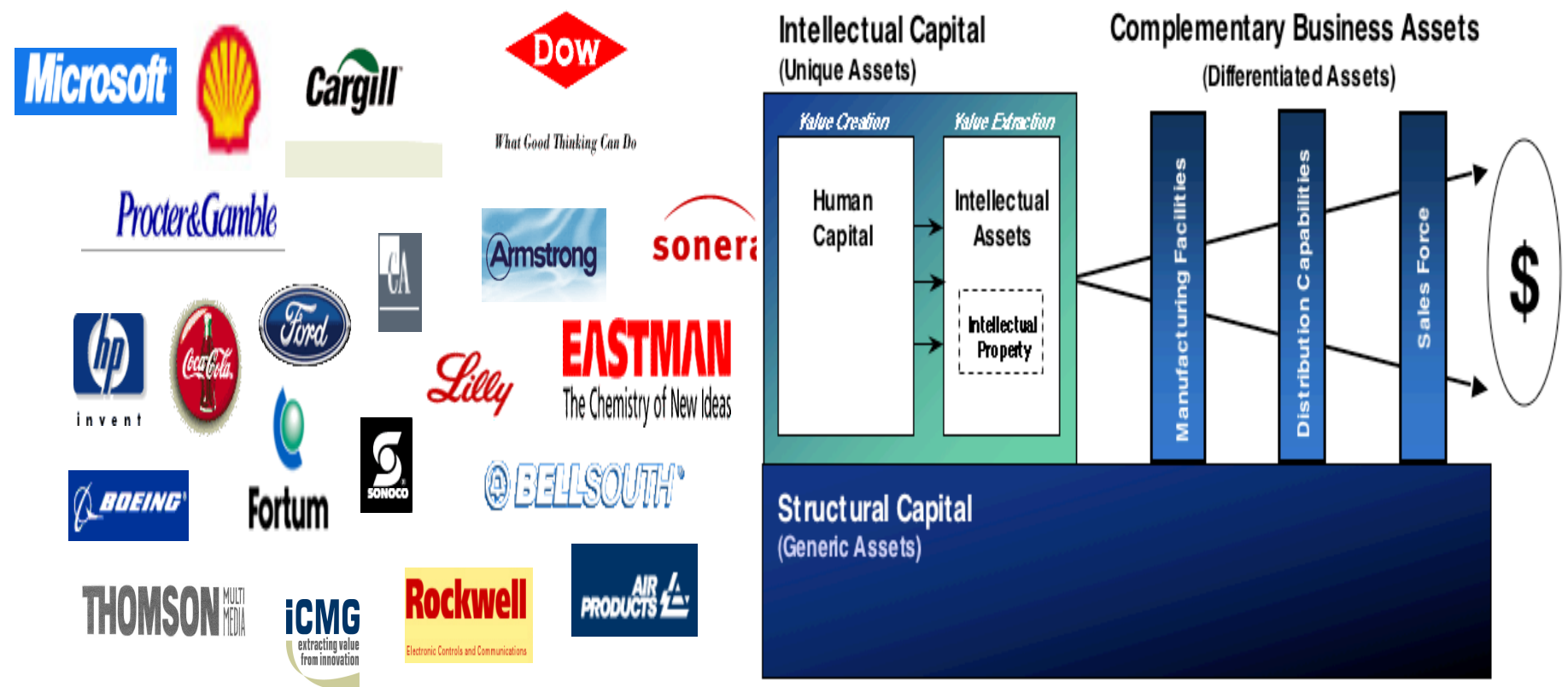


- Concepts
- Methodology
- Patents
- Software design
- Rollout strategy for profession

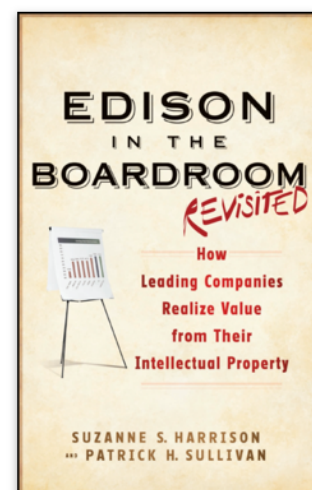
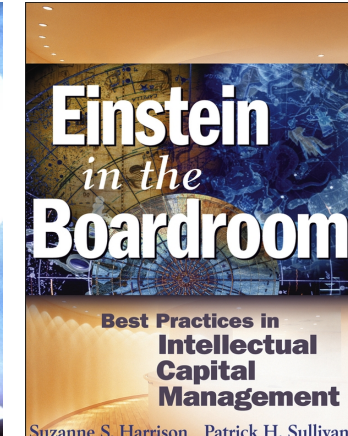
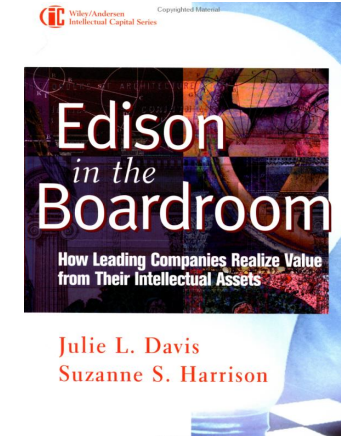
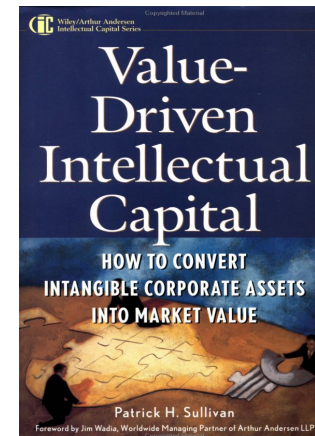
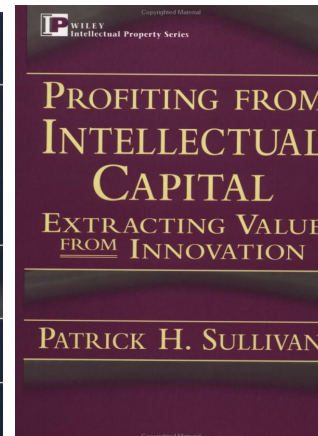
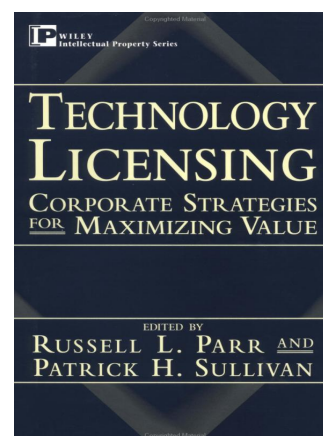
# 1997-2007: ICM Gathering



Pat Sullivan  
ICMG



Suzanne Harrison  
ICMG



A key insight: Value creation from IP (and other intangibles) depends on the value streams IP can enable, in context

# 2005-2006: Value Measurement and Reporting Collaborative (VMRC)



**Wolf Böhm**  
IDW, Director  
Assurance  
Standards,  
International  
Affairs

## Measurement Fundamentals

- Measurement Object
  - Property being measured
  - Unit of measure
  - Measurement scale (Precision)
  - Commensurability
- These are “baked-in” to traditional accounting (where the principal measurement object is a *transaction*)
  - Outside the traditional transaction-centric accounting paradigm, we need to explicitly consider measurement fundamentals, to ensure that measures are fit for purpose
  - With many popular non-financial frameworks, we discover significant validity and precision concerns (discussed in a forthcoming Measurement Discussion Paper)



# **What is Your Data Worth: Perspectives and Concepts**

## **Perspectives**

- 1. Decision-Making Perspective on Value Creation From Data**
- 2. Buying, Selling, or Licensing Data Perspective**
- 3. Data Valuation Perspective**
- 4. Data From a Taxation Perspective**
- 5. Data From a Financial Reporting Perspective**
- 6. Data From a Risk and Risk-Management Perspective**
- 7. Public Policy Perspective on Data**

## **Value Concepts**

- 1. Historical cost value**
- 2. Market value (value in exchange)**
- 3. Value in use**
- 4. Economic Value (in context, incremental value in use)**
- 5. Fair Value as defined in IFRS® 13**
- 6. Financial Reporting value**

# Decision-Making Perspective: Value Streams from Data

Most data is not inherently valuable: so the key question is, how can we optimize the value streams enabled by data?

“A value stream is a flow of financial and/or non-financial benefits to an organization and/or its stakeholders, typically from a specific innovation, technology, product, or service line”

<b>A. Data Insights Value Streams</b>	<b>B. Data Transactions Value Streams</b>
A1. Customer-related value streams	B1. Data-based Advertising
A2. Operations-related value streams	B2. Data-based Services
A3. Innovation-related value streams	B3. Data-based Licensing
A4. Algorithm-based value streams	B4. Data-based Sales

“It is important to think of data as a “flow asset” rather than as a “stock asset” since, unless data is continuously refreshed, its value may diminish to zero in a remarkably short period of time”

# “Economic Value” Concept (for Data and other intangibles)

Accounting definition of “value-in-use” (IAS 36) has limitations for data

- “the present value of the future cash flows expected to be derived from an asset or cash-generating unit”

Modified “Economic Value” concept is essential for decision-making purposes related to data)

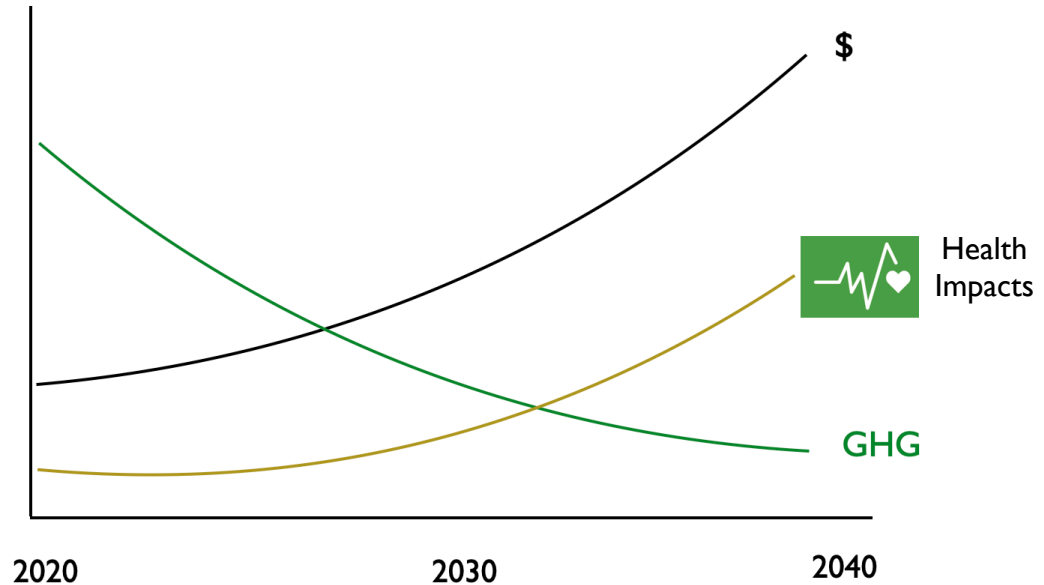
- VIU that
  - ▶ explicitly considers *context* (of an owner or a prospective purchaser)
  - ▶ includes both *financial and non-financial* value streams
  - ▶ views value streams from the perspective of the organization *and its stakeholders*
  - ▶ isolates the *incremental value streams* attributable to assets, like data, that create value streams in combination with complementary business assets



# Theo's Questions

● How does data create value?	✓
● Do we see it now?	Depends on “perspective”
● If so, where should you look to see it?	In financial statements, incremental value realization impact of data is buried in historical revenues
● If not, what should be our approach to measuring and reporting on the value of data?	Depends on whether the paradigm is value <i>realization</i> or value <i>creation</i>

# “Accounting” for Data Value (Personal views)

<p><b>Value Realization Paradigm (backward-looking)</b></p>	<p><b>Value Creation Paradigm (forward-looking)</b></p>
<ul style="list-style-type: none"> <li>• Traditional transaction-centric accounting can't measure value creation, but still has an important role in our system of corporate governance and accountability. Let's not undermine it in an attempt to make it do what it inherently cannot do</li> <li>• If data is acquired in a third- party transaction it can be recorded on a balance sheet at the lower of cost or fair value, and self-generated data may be recognized as an asset if evidence of future economic benefits is strong and cost can be reliably determined. This is consistent with other intangibles.</li> </ul>	<ul style="list-style-type: none"> <li>• To provide insights on value creation, let's focus on ways to disclose the economic value of future value streams for organizations and their stakeholders over the long-run, (including reasonable estimates of future value steams enabled by data )</li> </ul> 

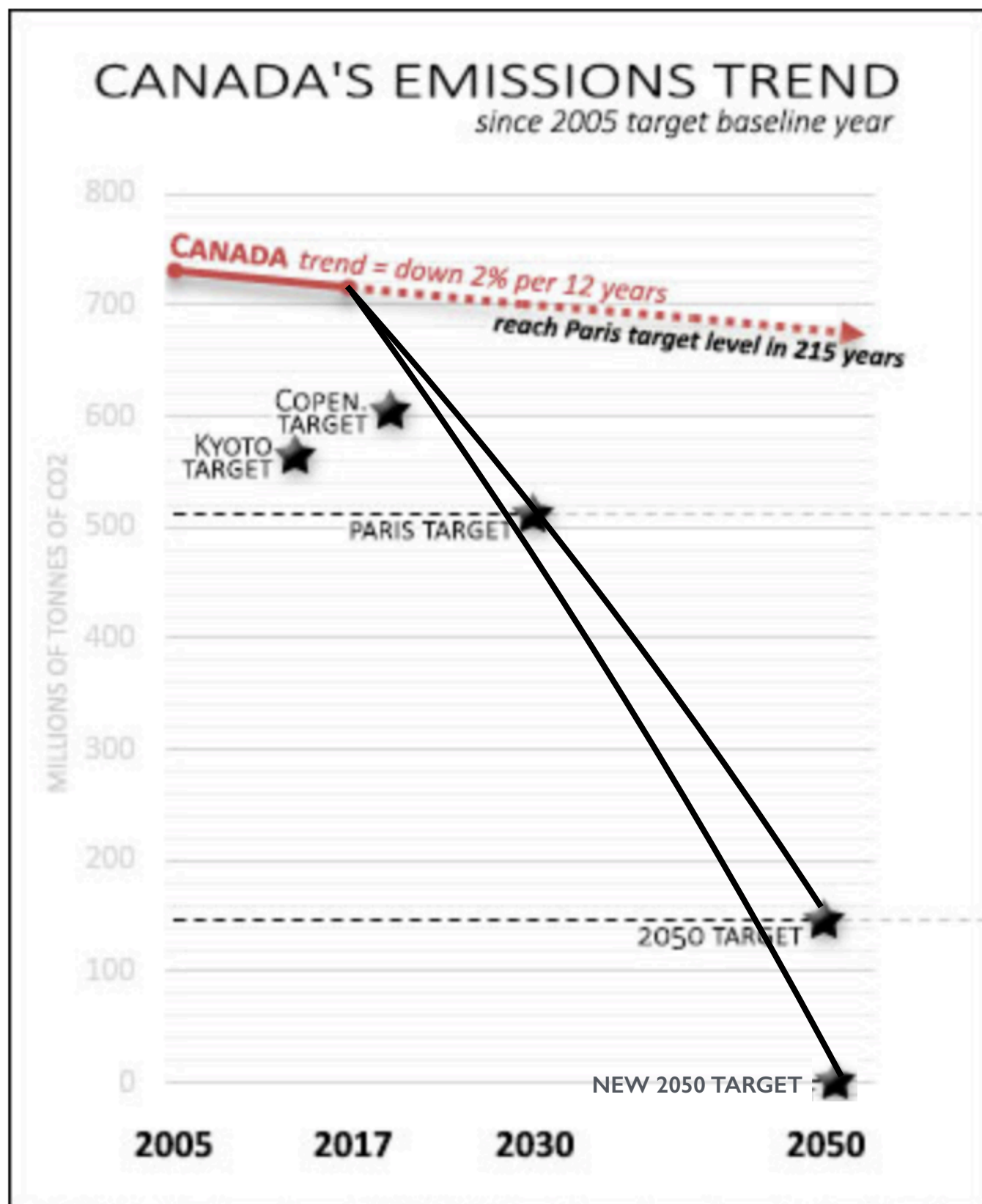
# Steering by the Wake ... ?



- Backward-looking traditional financial reporting inherently involves “steering by the wake”.
- Surprisingly, most advocates for VC, environmental and impact reporting have embraced financial reporting’s backward-looking annual report approach, disclosing last-year’s impacts
- Putting the “economic value” of intangibles on the balance sheet, or ESG impacts on the income statement is still the wrong answer to the wrong question (technical commensurability issues aside)
- The right question is: how can we measure and disclose future value streams (including impacts) for the organization and its stakeholders?



# ... or Foresight?



SOURCES: data from Canada's 2019 National Inventory Report. Chart by Barry Saxifrage at VisualCarbon.org and NationalObserver.com. April 2019

- In addition to backward-looking reports, why not disclose our *long-term* targets, and our current trajectory, as future curves, so as to focus attention on the gaps we are working to close?
- The urgency of Foresight is increased by AI forcing us toward real-time forward-looking disclosures
- Value creation from data is a part of this larger picture: will be key to achieving target curves
- Many corporations are committing to “net zero by 2050”. The CPA profession (and accounting educators) can build on this by helping organizations to embrace Foresight, by measuring and disclosing future long-term value creation curves for the organization and its stakeholders
- Thanks for listening!