

weARE
webinar series on

**Accounting
Research +
Education**

The Profitability Analytics Framework

Monte Swain, PhD, CPA, CMA, CGMA
Deloitte Professor of Accountancy
Brigham Young University

Our Agenda

1) A Brief History of Management Accounting

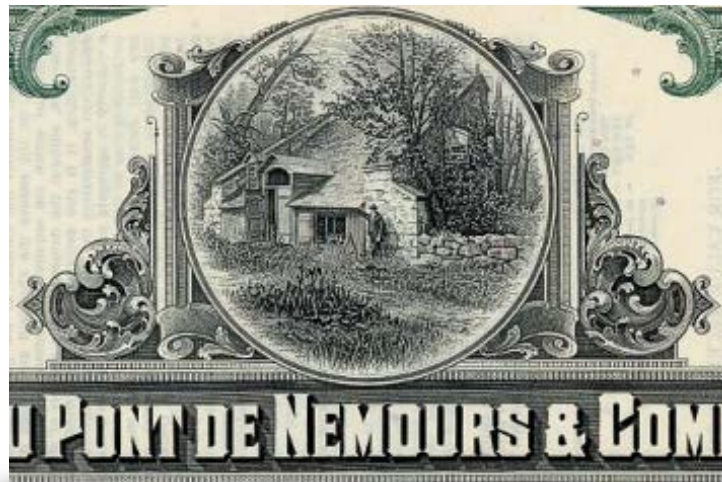
2) The Return on Investment (ROI) Model

3) The Profitability Analytics Framework

4) What's Next? How to Get Involved?

1) A Brief History of Management Accounting

Eleuthère Irénée du Pont de Nemours (1771 - 1834)



The DuPont Corporation

(See *The Management Accounting Quarterly*, Institute of Management Accountants, Winter 2021)

A Brief History

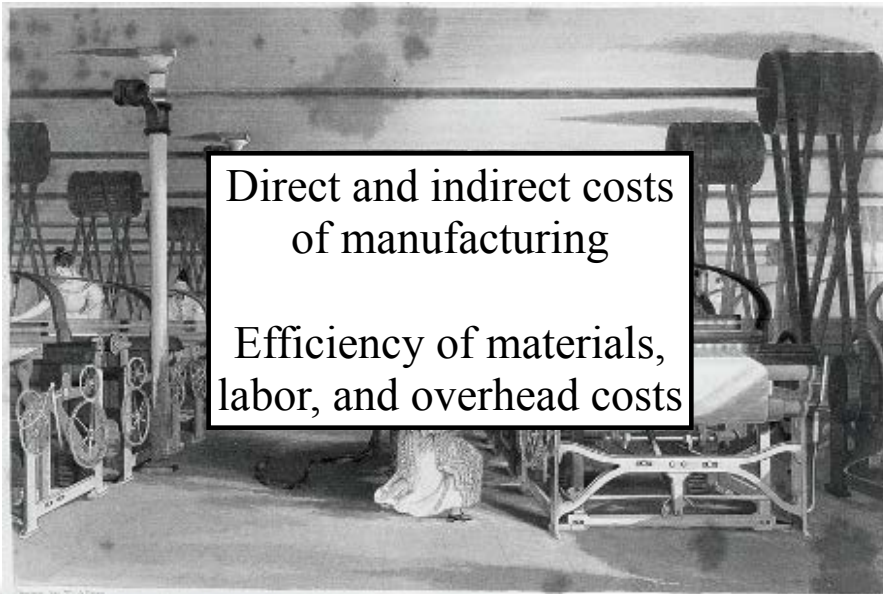
Pre-Industrial Revolution



Wheelwright and Wagon Shop

[A Brief History](#)

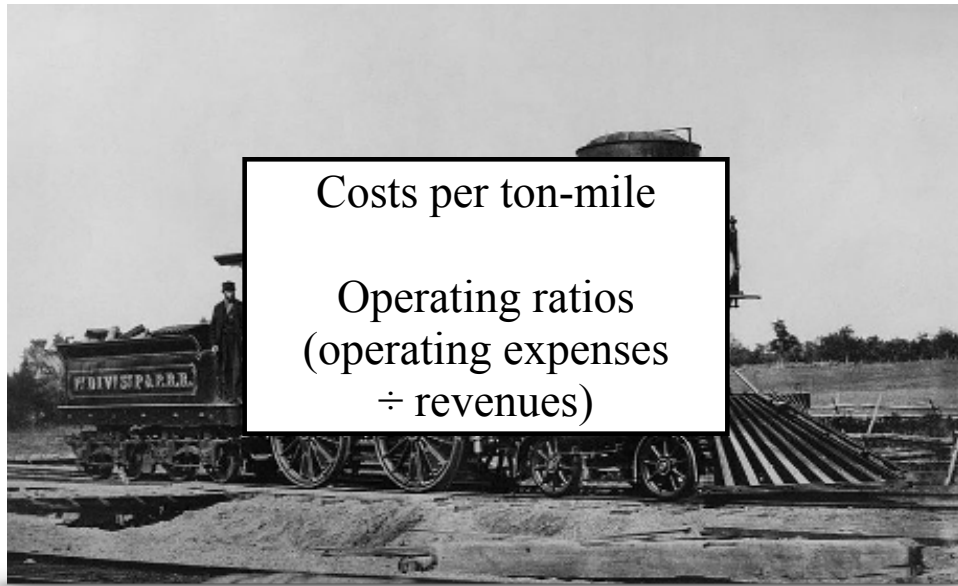
Francis Cabot Lowell (1775 - 1817)



Boston Manufacturing Company

[A Brief History](#)

Albert Fink (1827 - 1897)



Louisville & Nashville Railroad

[A Brief History](#)

Andrew Carnegie (1835 - 1919)



Carnegie Steel Company

[A Brief History](#)

Richard Sears (1863 - 1914)

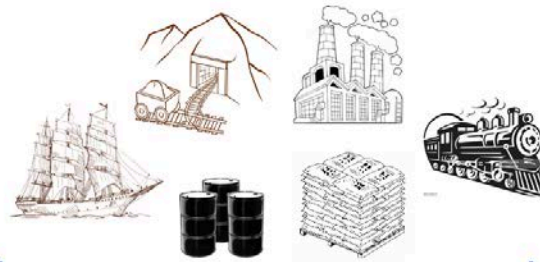


Stockturns
(inventory ÷ sales)

Sears, Roebuck & Company

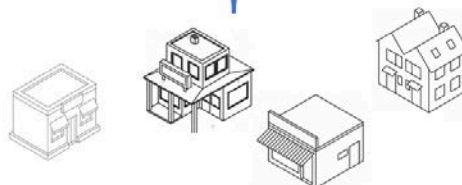
A Brief History

DuPont Company Before 1903



Outside Suppliers
and Transportation

DuPont Manufacturing Company

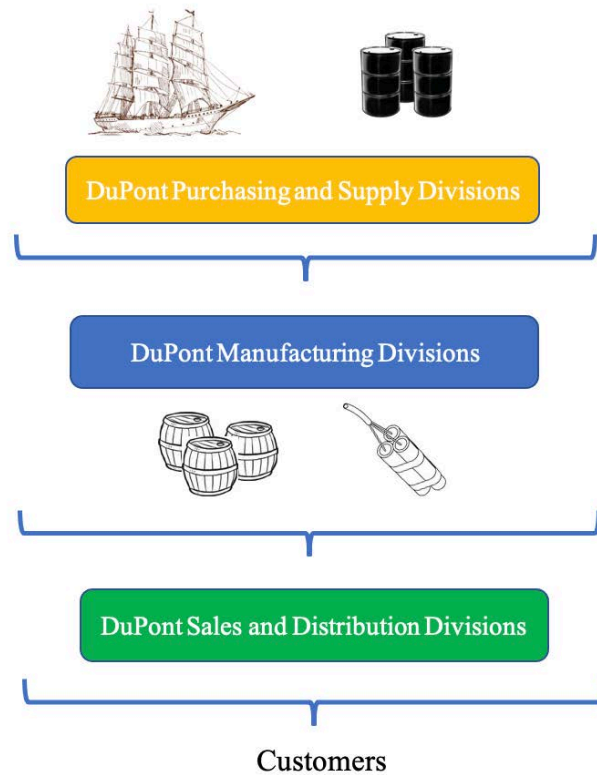


Outside Retailers
and Distribution

Customers

A Brief History

DuPont Company After 1903



A Brief History

F. Donaldson Brown (1885 - 1965)



At Dupont, circa 1920

A Brief History

F. Donaldson Brown (1885 - 1965)



At Dupont, circa 1920

The “Eureka Summer” of 1914

“I undertook the job.... and I have often wondered what might have been my fate and fortune in industrial management if I had not, that summer, hit upon the mathematical equation ($R = T \times P$).”

[A Brief History](#)

The DuPont Formula (simple)

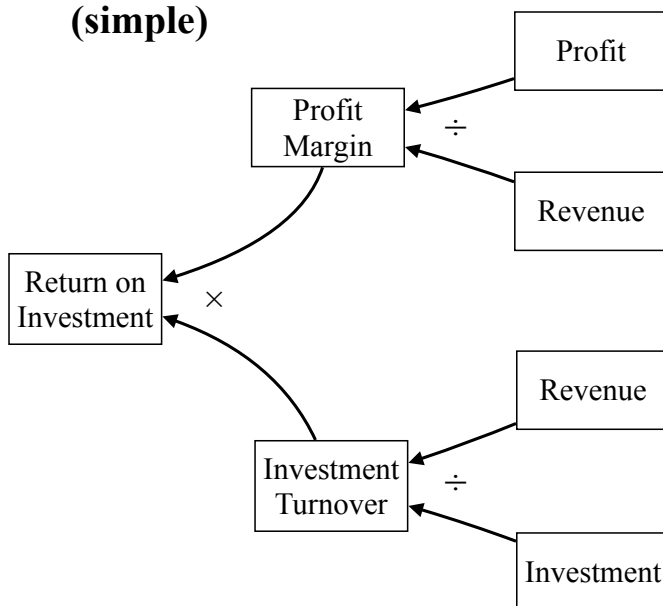
$$\text{Return on Investment} = \text{Investment Turnover} \times \text{Profit Margin}$$

$$\frac{\text{Profit}}{\text{Investment}} = \frac{\text{Sales}}{\text{Investment}} \times \frac{\text{Profit}}{\text{Sales}}$$

[A Brief History](#)

2) The Return on Investment (ROI) Model

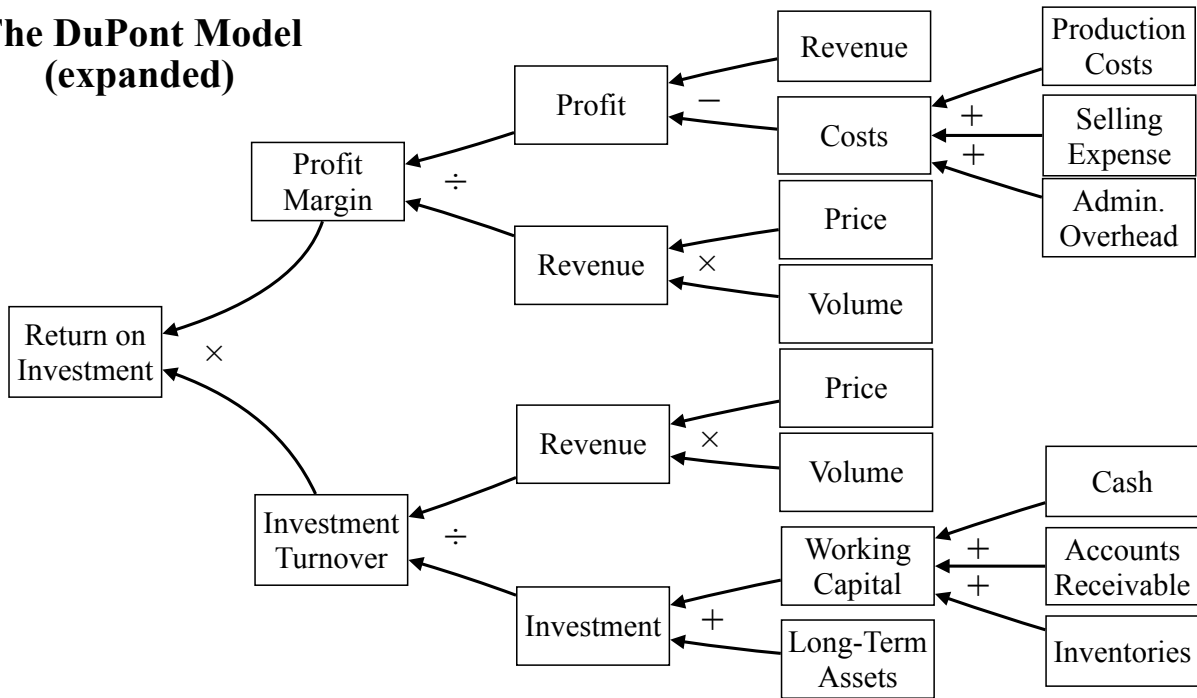
The DuPont Model (simple)



Source: Davis, T.C., 1950, "How the DuPont Organization Appraises its Performance," in AMA Financial Management Series No 94. (American Management Association, New York), p. 7.

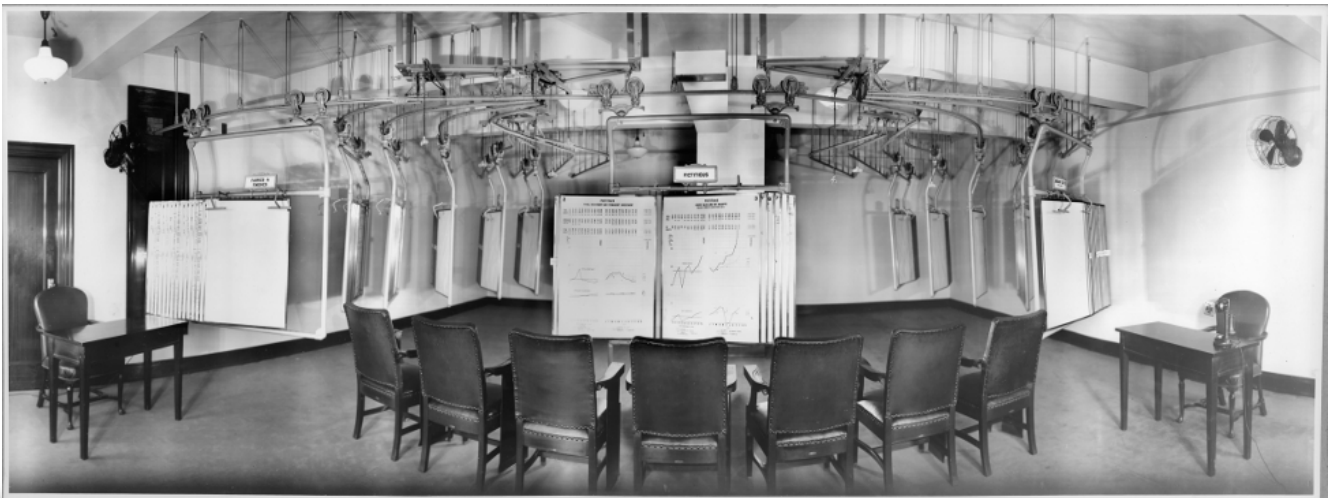
The ROI Model

The DuPont Model (expanded)



Source: Davis, T.C., 1950, "How the DuPont Organization Appraises its Performance," in AMA Financial Management Series No 94. (American Management Association, New York), p. 7.

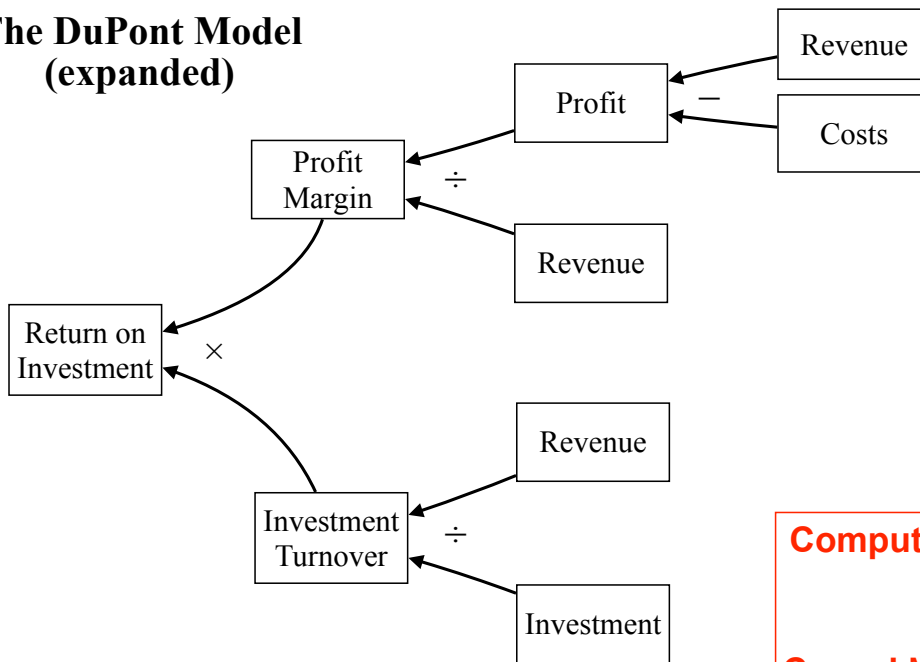
The ROI Model



The Dupont Chartroom, circa 1950

The ROI Model

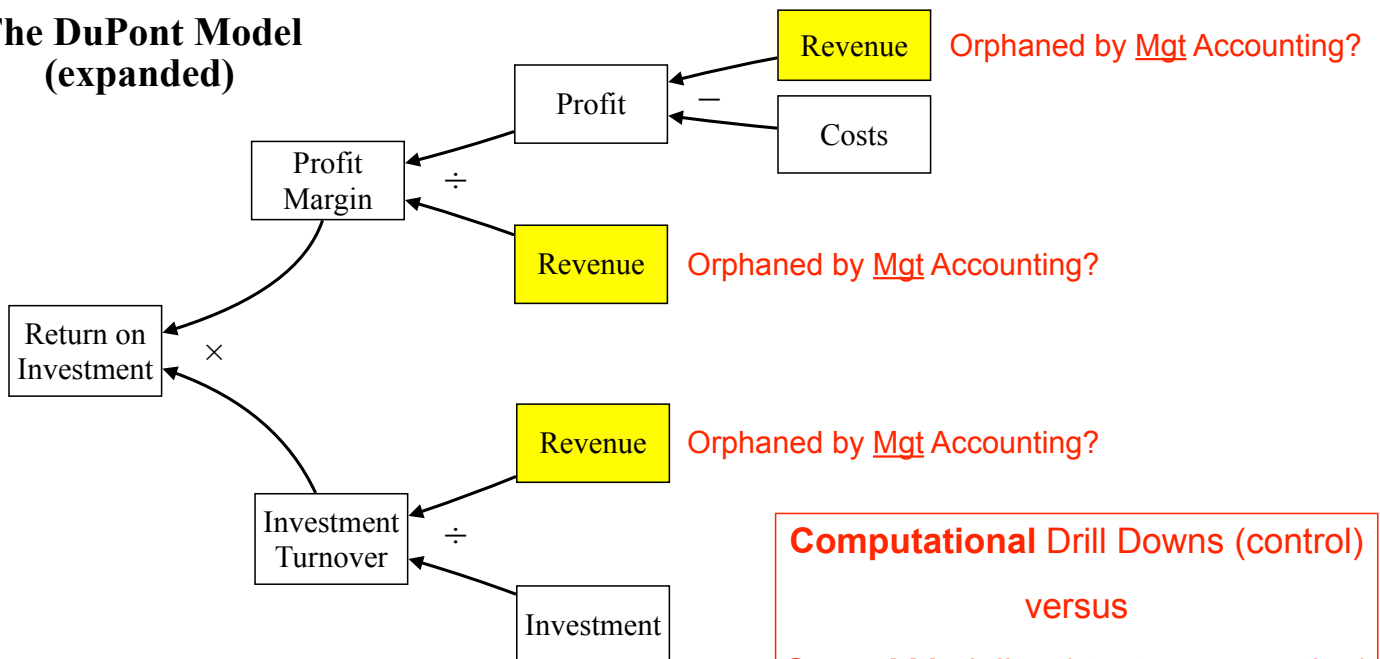
The DuPont Model (expanded)



Computational Drill Downs (control)
versus
Causal Modeling (strategy execution)

The ROI Model

The DuPont Model (expanded)



Computational Drill Downs (control)
versus
Causal Modeling (strategy execution)

The ROI Model



3) The Profitability Analytics Framework

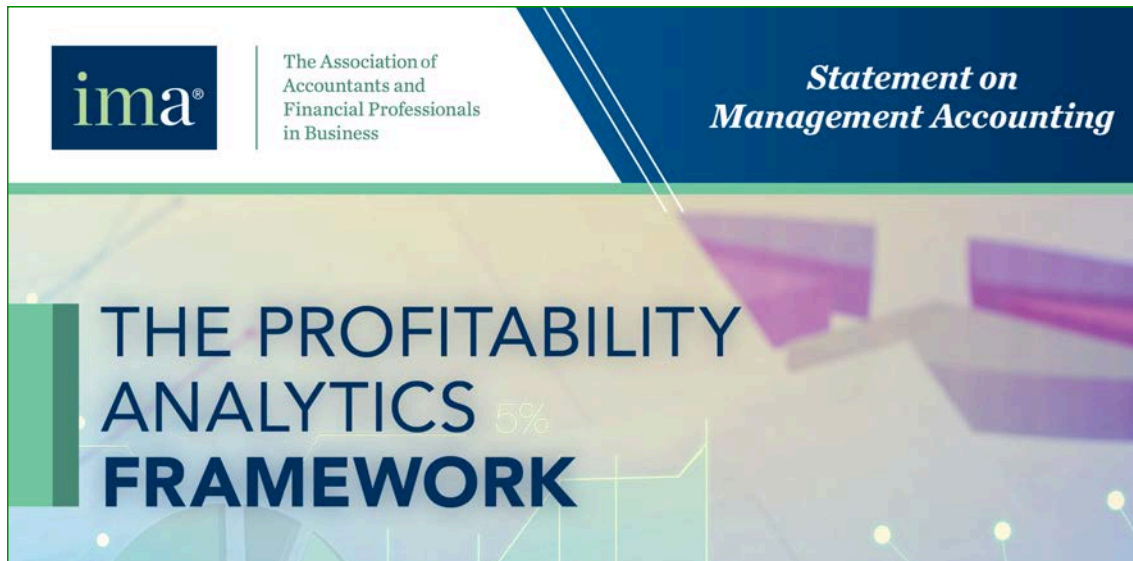
Statement on Management Accounting

SMA's present IMA's position on best practices in management accounting. These authoritative monographs cover the broad range of issues encountered in practice.

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The Association of
Accountants and
Financial Professionals
in Business

ima® The SMA



Larry White, Monte Swain, Gary Cokins, and Douglas Hicks (Nov 2020)



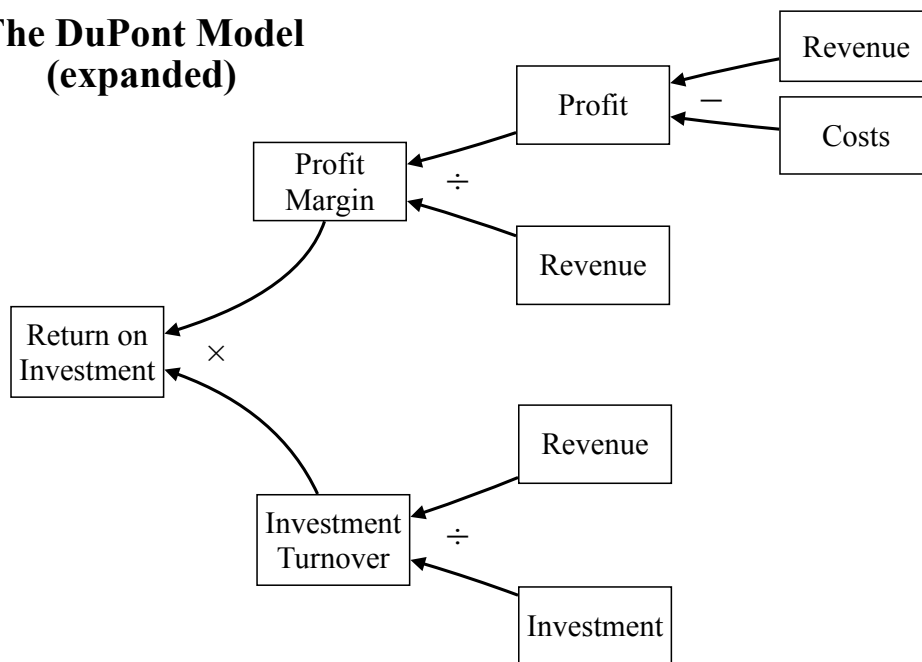
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PROFITABILITY ANALYTICS
CENTER OF EXCELLENCE

The Profitability Analytics Center of Excellence (PACE) is a non-profit community of professionals and academicians dedicated to helping organizations make better, more informed decisions through the development and use of analytical models employing sound economic principles.



The DuPont Model (expanded)



PACE



Profitability Analytics is ...

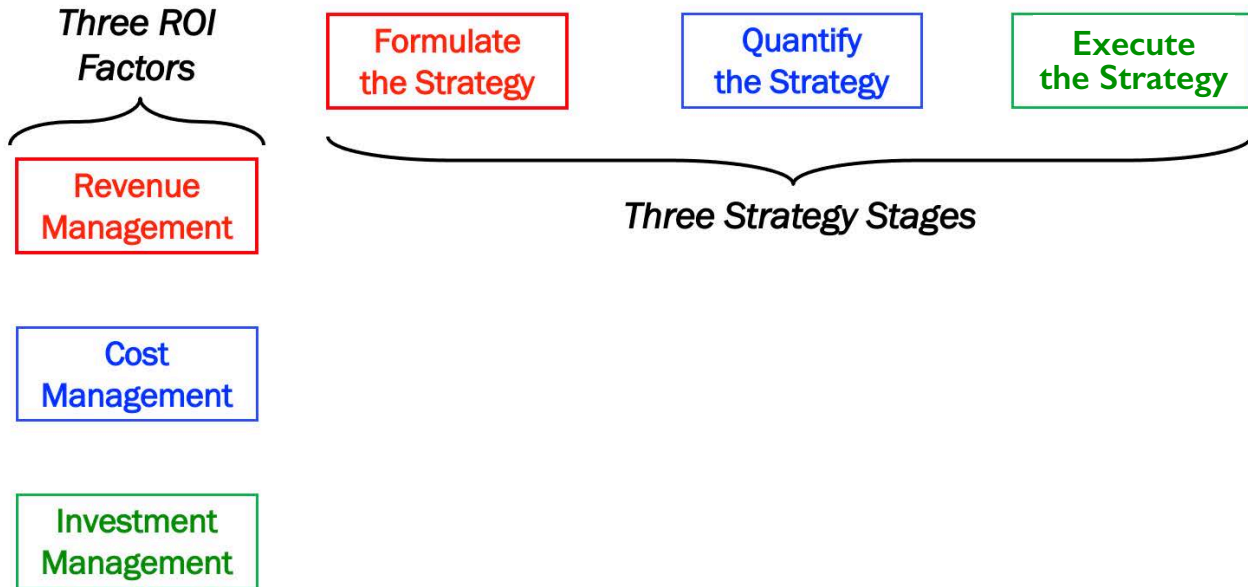


...the Point where Revenue Management, Cost Management and Investment Management Intersect

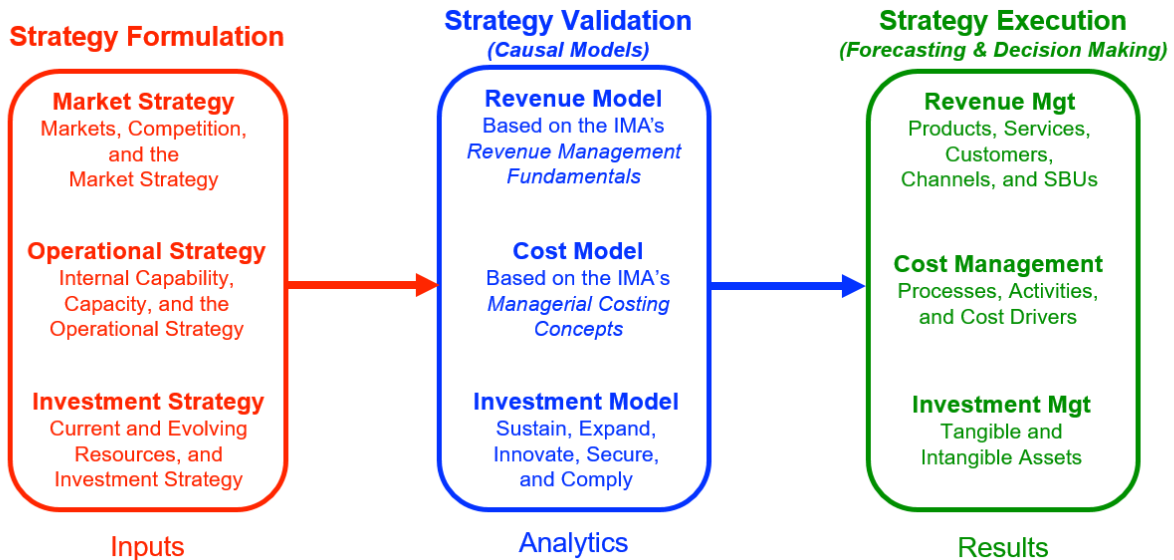
PACE



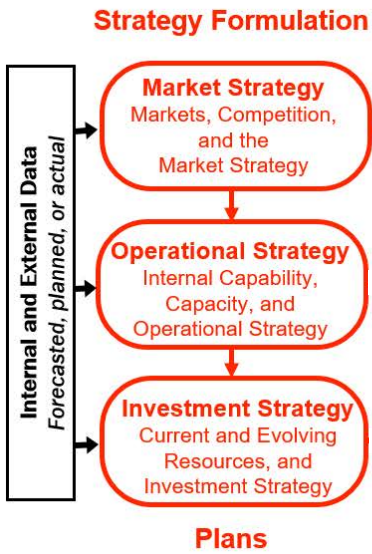
The Profitability Analytics Model



The Profitability Analytics Model



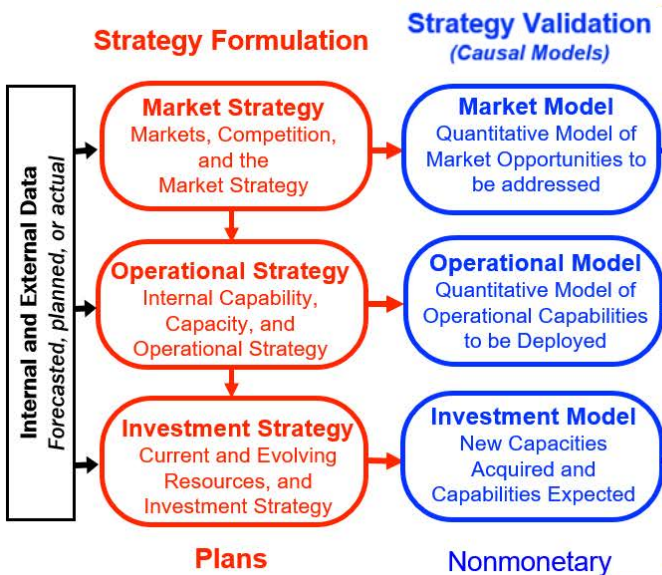
The Profitability Analytics Model



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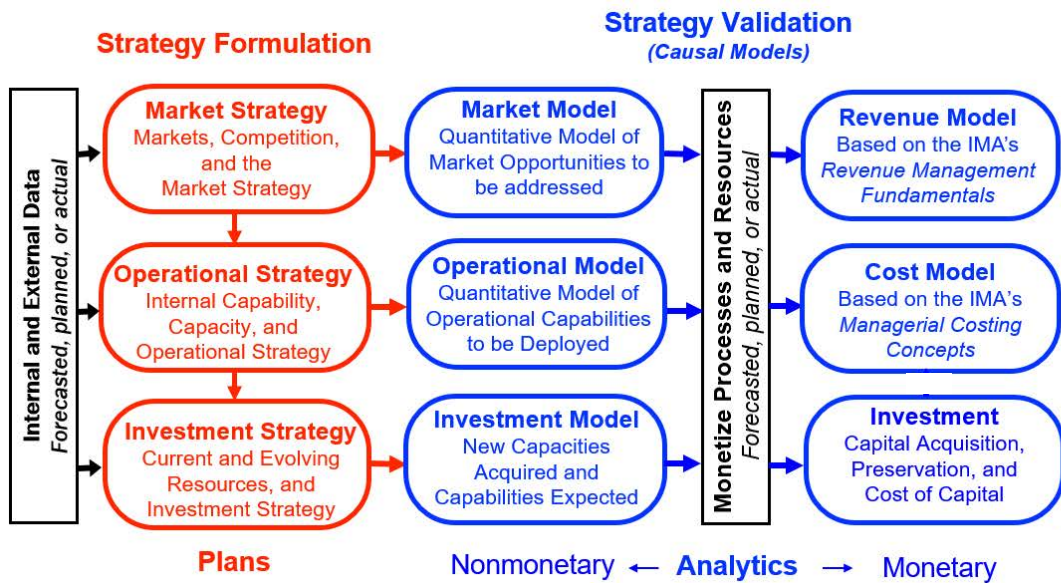
The Profitability Analytics Model



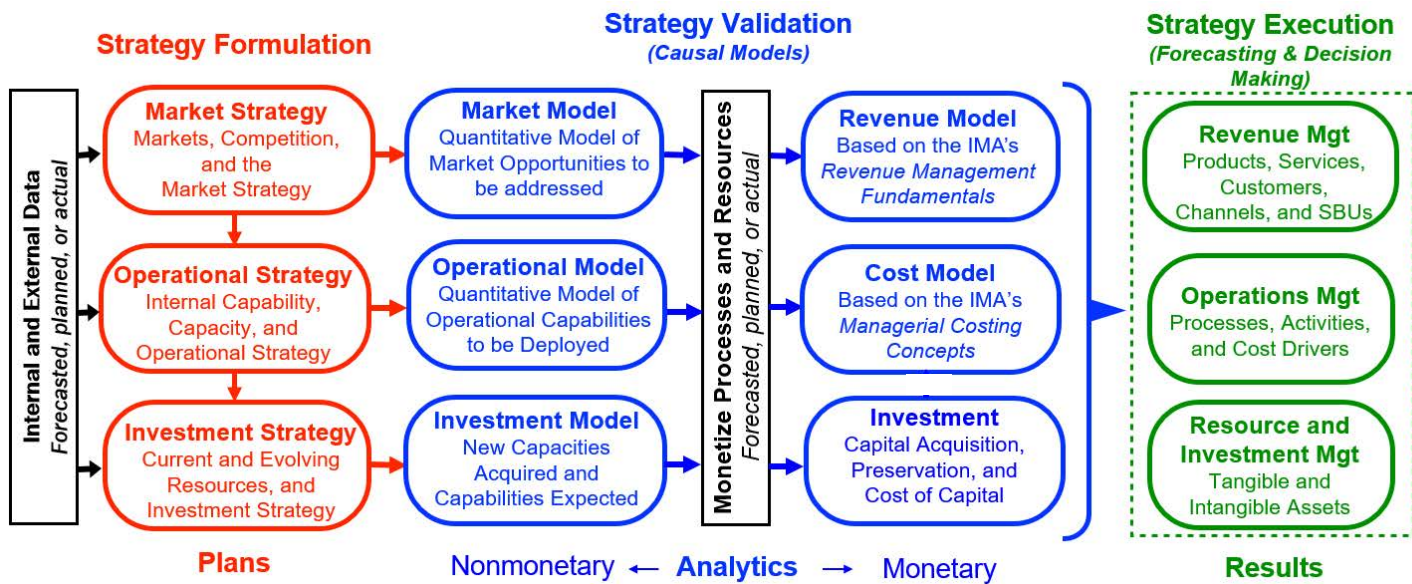
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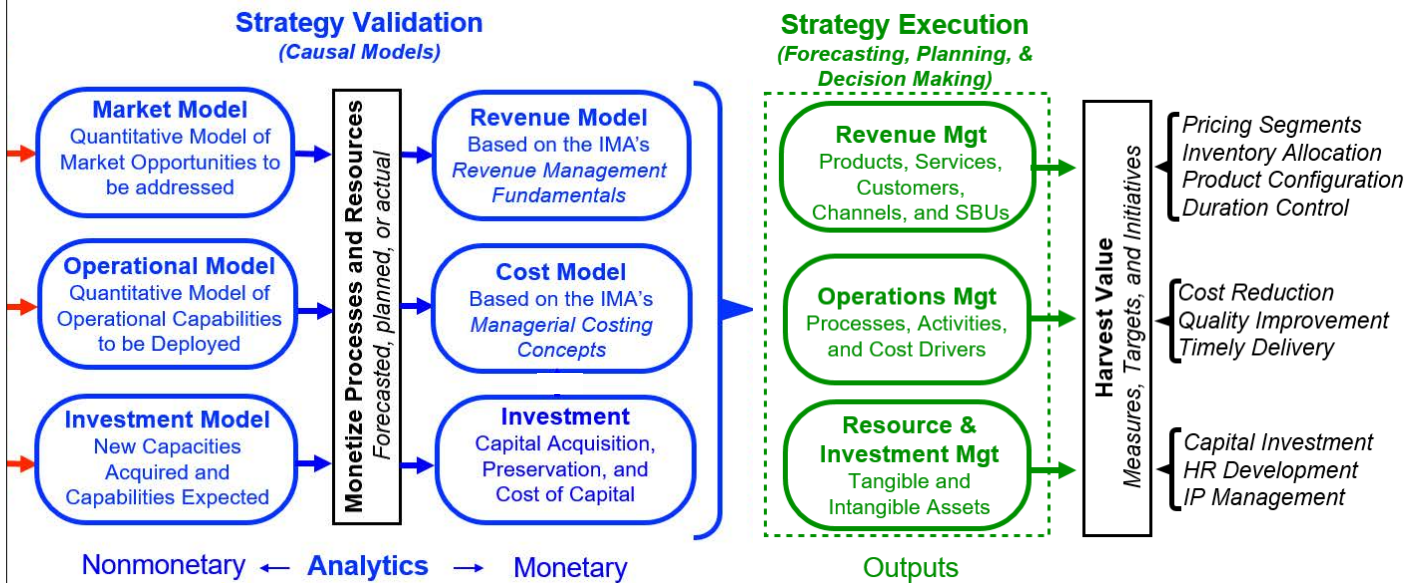
The Profitability Analytics Model



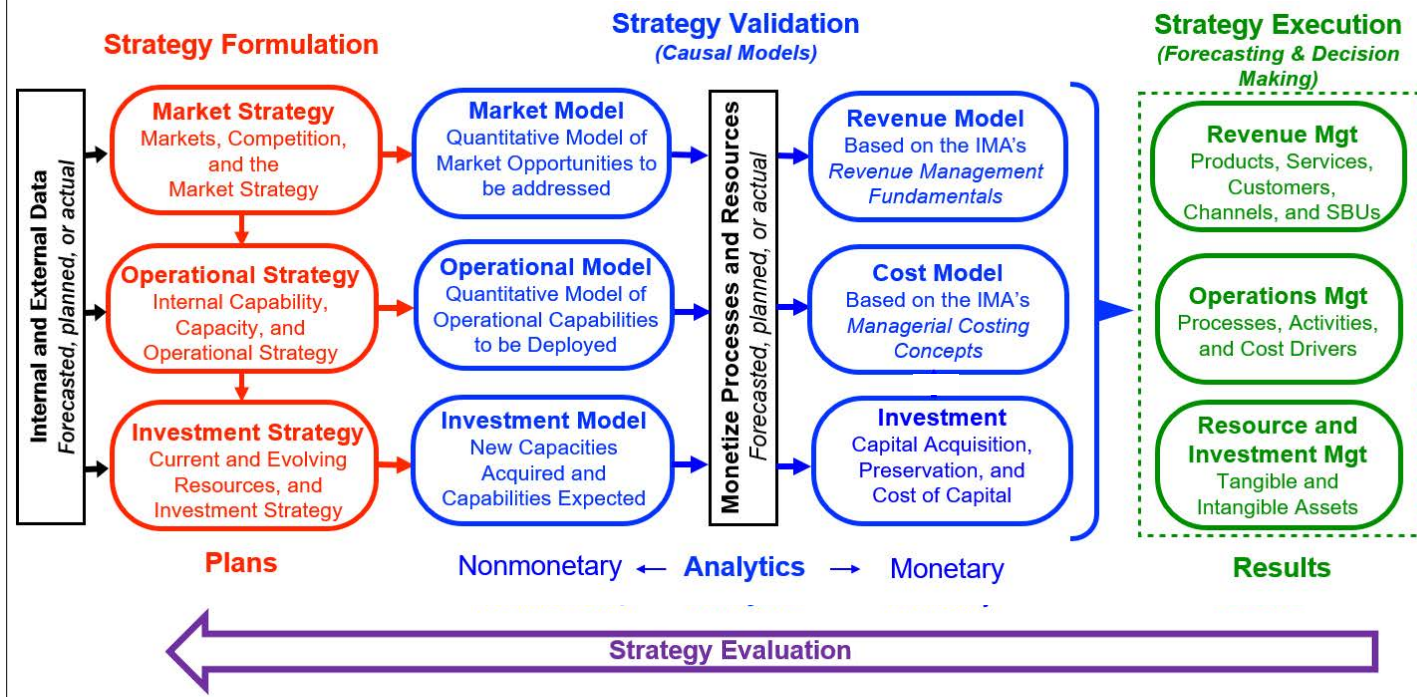
The Profitability Analytics Model



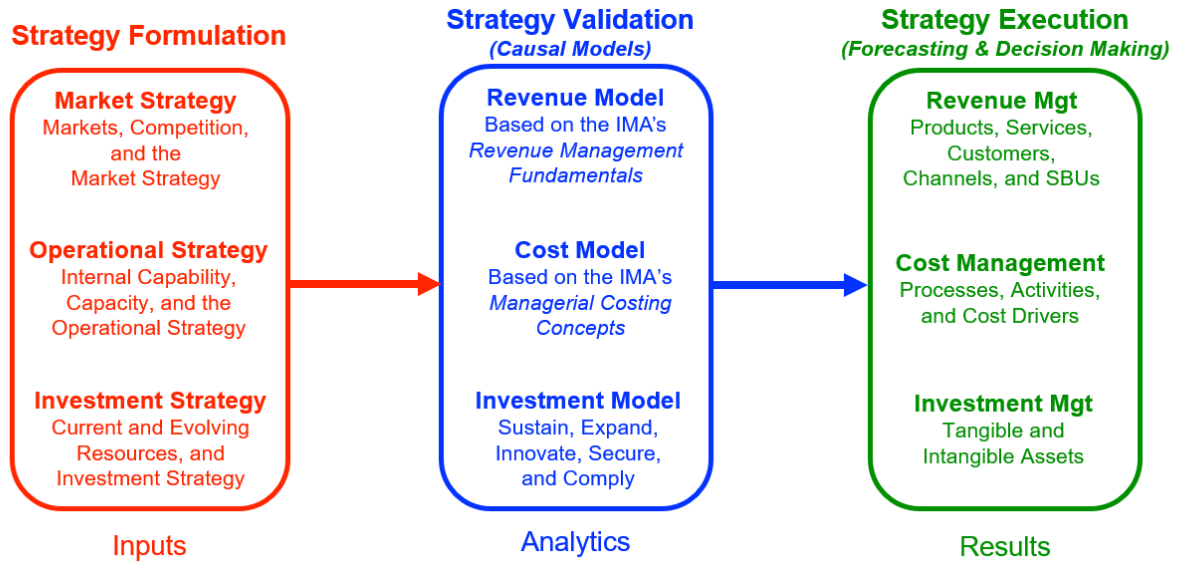
The Profitability Analytics Model



The Profitability Analytics Model



The Profitability Analytics Model

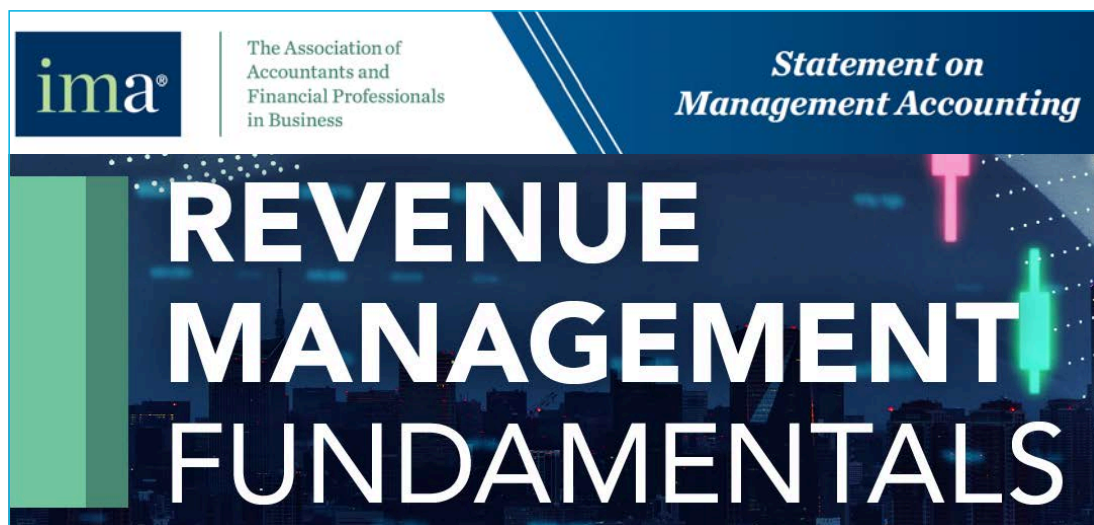
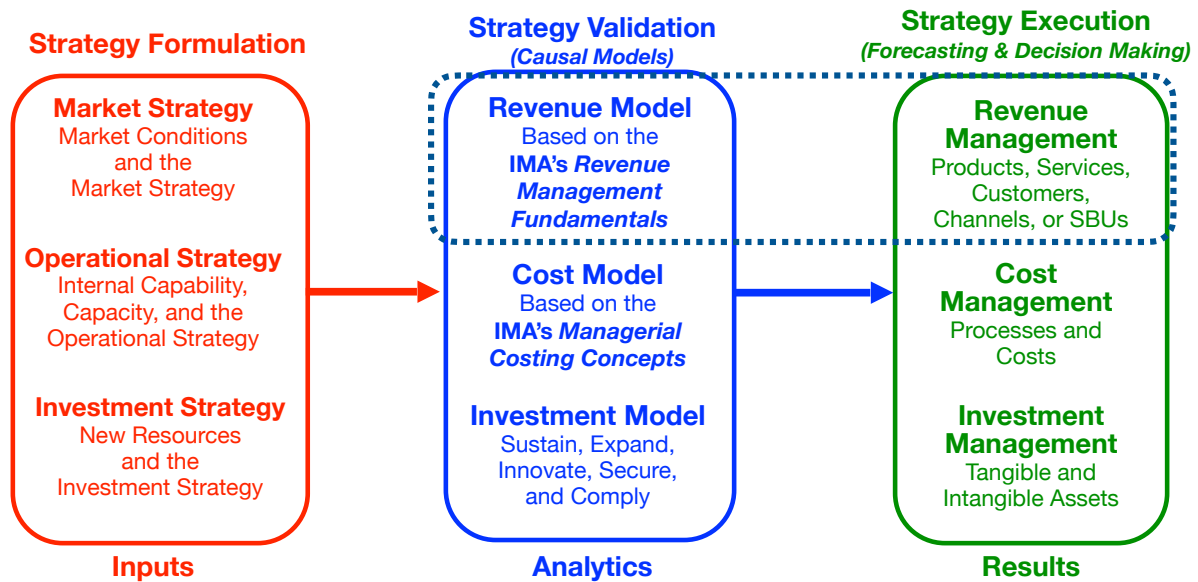


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4) What's Next? How to Get Involved?

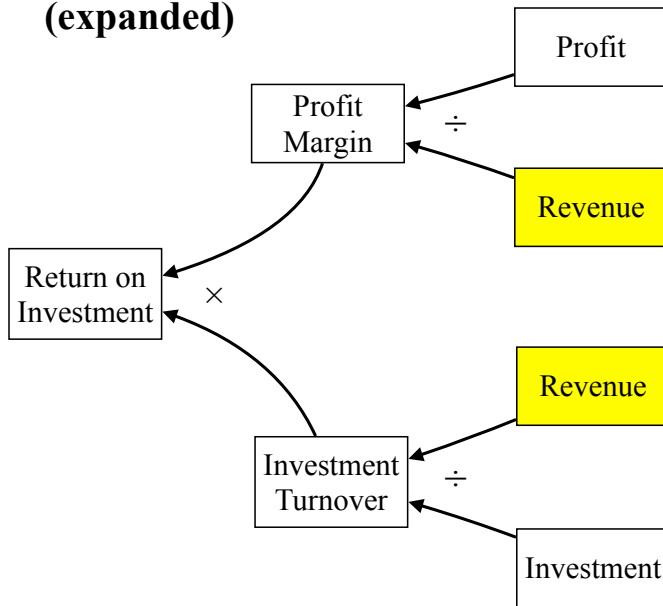
The PACE Profitability Analytics Model



Julie Harrison, Fred Ng, Paul Rouse,
and Monte Swain (Oct 2020)

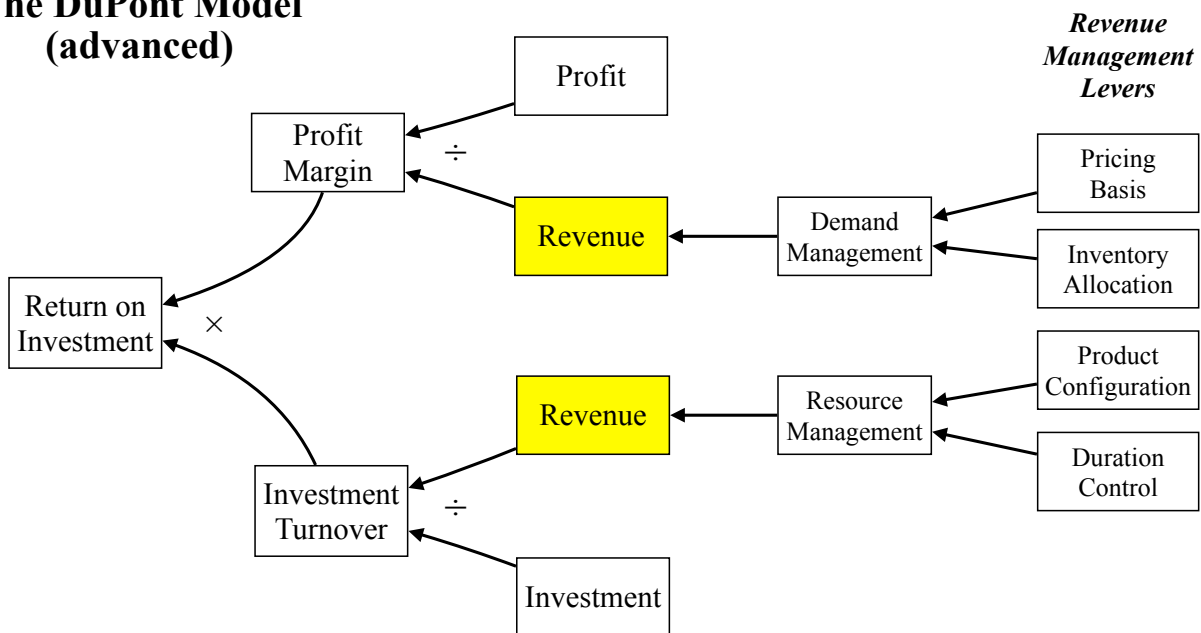


The DuPont Model (expanded)



The ROI Model

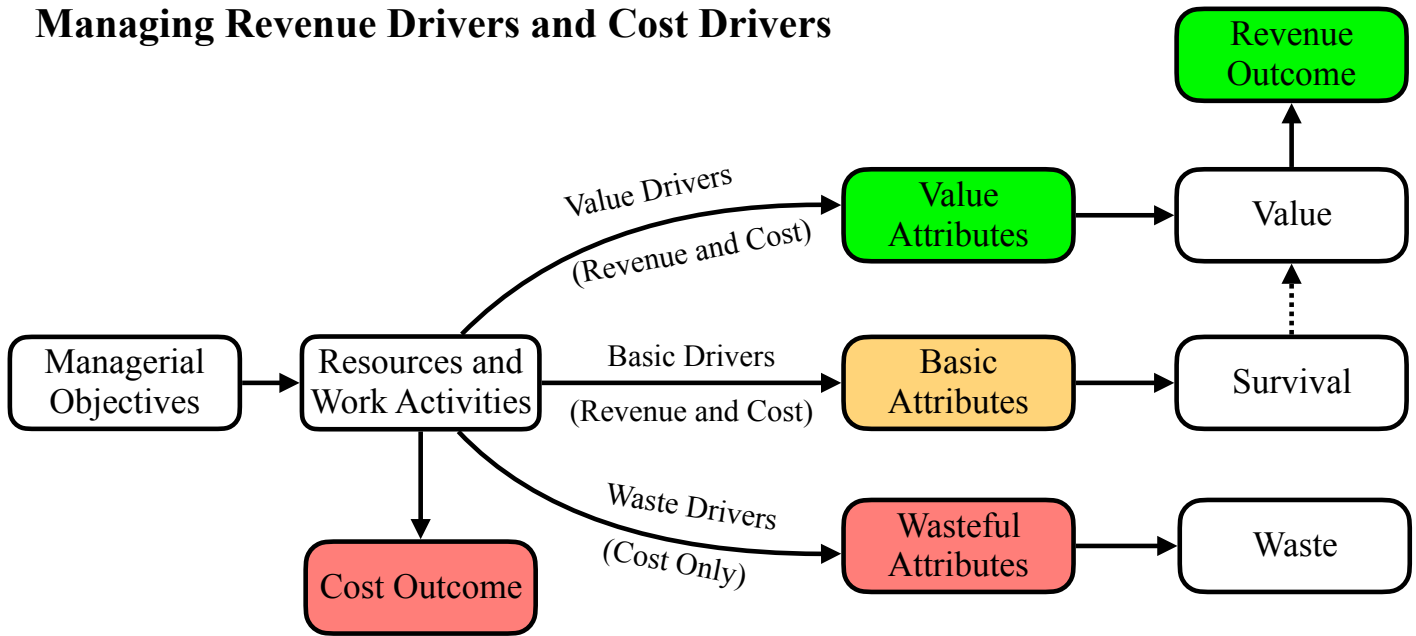
The DuPont Model (advanced)



Source: Harrison, J., F. Ng, P. Rouse, and M. Swain, 2020, "Revenue Management Fundamentals," *Statement on Management Accounting*, (Institute of Management Accountants, New Jersey).



Managing Revenue Drivers and Cost Drivers



Source: Harrison, J., F. Ng, P. Rouse, and M. Swain, 2020, "Revenue Management Fundamentals," *Statement on Management Accounting*, (Institute of Management Accountants, New Jersey).



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