

Successful Product Innovation Key to International Competitiveness

The NRC-IRAP I2D “Big Ideas to Winning Product Developments” Initiative



With: Dr. Robert G. Cooper

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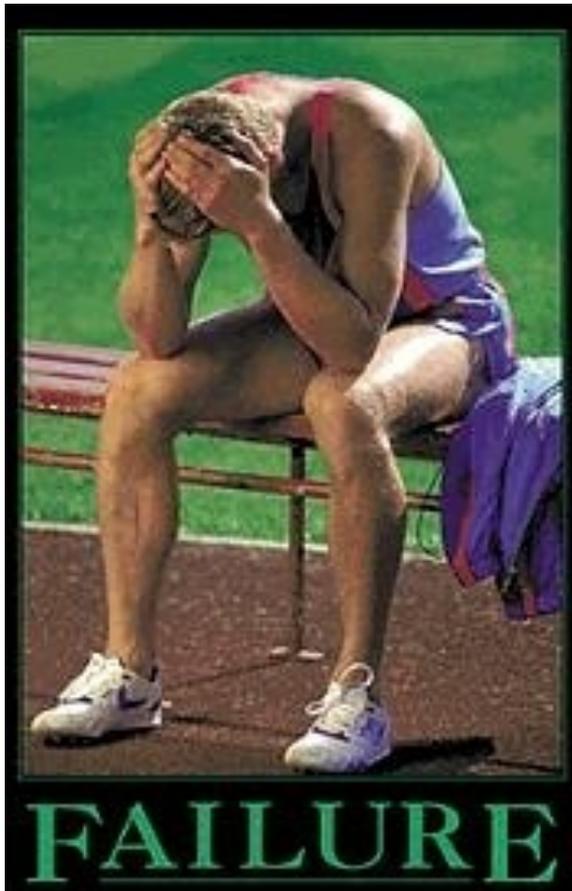
Product & Service Innovation: Today's Business Challenge

- ✓ High positive impact:
 - New products currently represent about 30% of companies' sales (3 yrs.)
- ✓ Companies expect to increase rate of product introductions by 21% over the next 5 years
- ✓ Almost half of CEOs rate innovation as 'very critical' to their future business success – the 'top rated' area
- ✓ Companies that are doing well today usually have a great portfolio of new products
- ✓ Innovativeness drives companies' investment values (P/E ratio)

Innovation is a prerequisite for sustained growth.
No other path to profitable growth can be sustained over time.

A. G. Lafley, former CEO, Procter & Gamble

New Products Have An Alarming Failure Rate – MOST FAIL!



- ❑ Of every nine *new product concepts*, only one becomes a commercial success, according to PDMA studies
- ❑ A review of many investigations suggests that about 40% of new products fail at launch
 - Even after all the product tests, customer trials & market tests
- ❑ Approximately 46% of company's resources spent on NPD go to unsuccessful ventures
- ❑ The PDMA best practices study reports a 59% success rate after launch

Four Common Denominators Distinguish Successful Innovation Businesses¹



1. Based on a series of APQC studies in the US

Creating Winning Products – 5 Critical Success Drivers

1

**Voice-of-Customer built in from idea-to-launch
Understanding customers' unmet, unspoken needs –
their “points of pain”**

2

**Doing the homework & front-end loading the project
is key to success – due diligence pays off!
Fact-based decisions**

3

**The high performance cross-functional project team:
dedicated players, strong team leader, cross-functional,
empowered, (resources/authority), accountable**

4

**FOCUS – tough gates with teeth. Learn to kill some
“ugly” projects. Most firms have too many projects
and too few resources to do them!**

5

**A systematic new-product idea-to-launch
process or gating system, such as Stage-Gate, to
guide new product projects to market**

**So How Do Canadian
Firms Fare – Performance
& Success Drivers?**

**Sadly no comparable study to the US
APQC study done in Canada**

**But we do have some data
from a Quebec-based
association of firms**

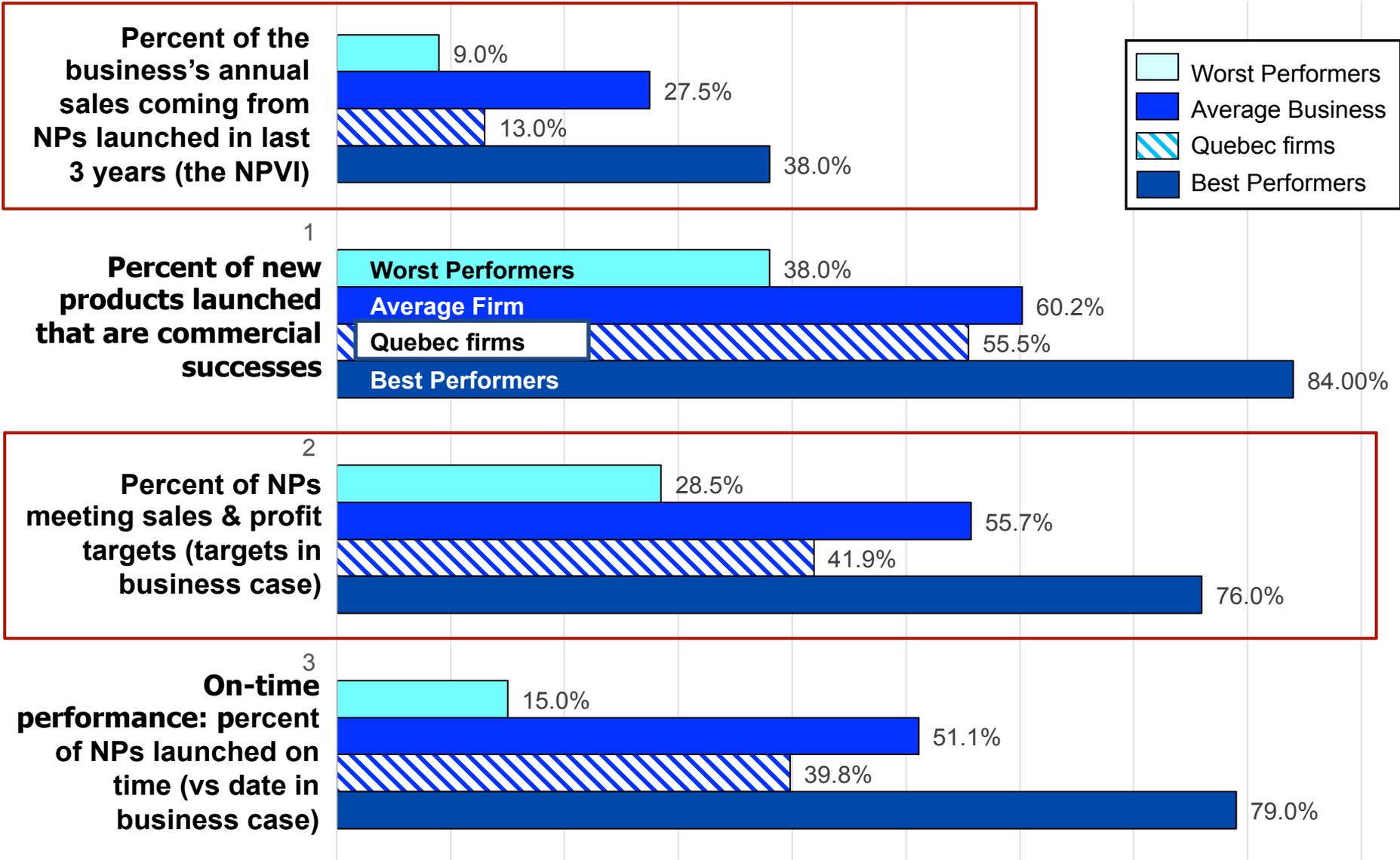
**A sub-set of 26 firms doing new-
product development took part... mostly
medium-large manufacturing firms**

Very provocative results!

**QC firms were gauged on the
US APQC metrics:
performance & practices**

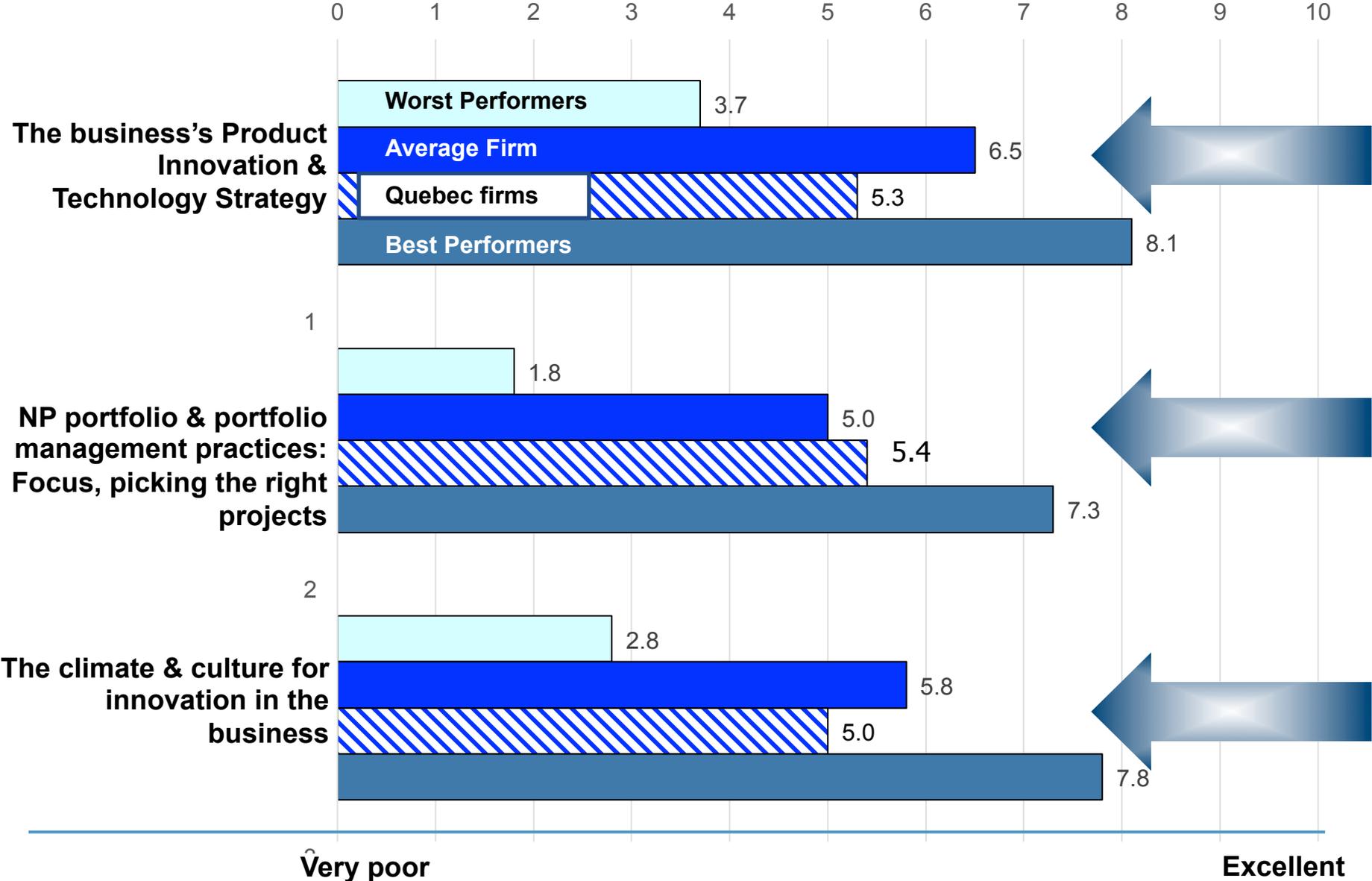
Overall NPD Performance – QC Firms on Four Key Metrics

0% 10% 20% 30% 40% 50% 60% 70% 80% 90%



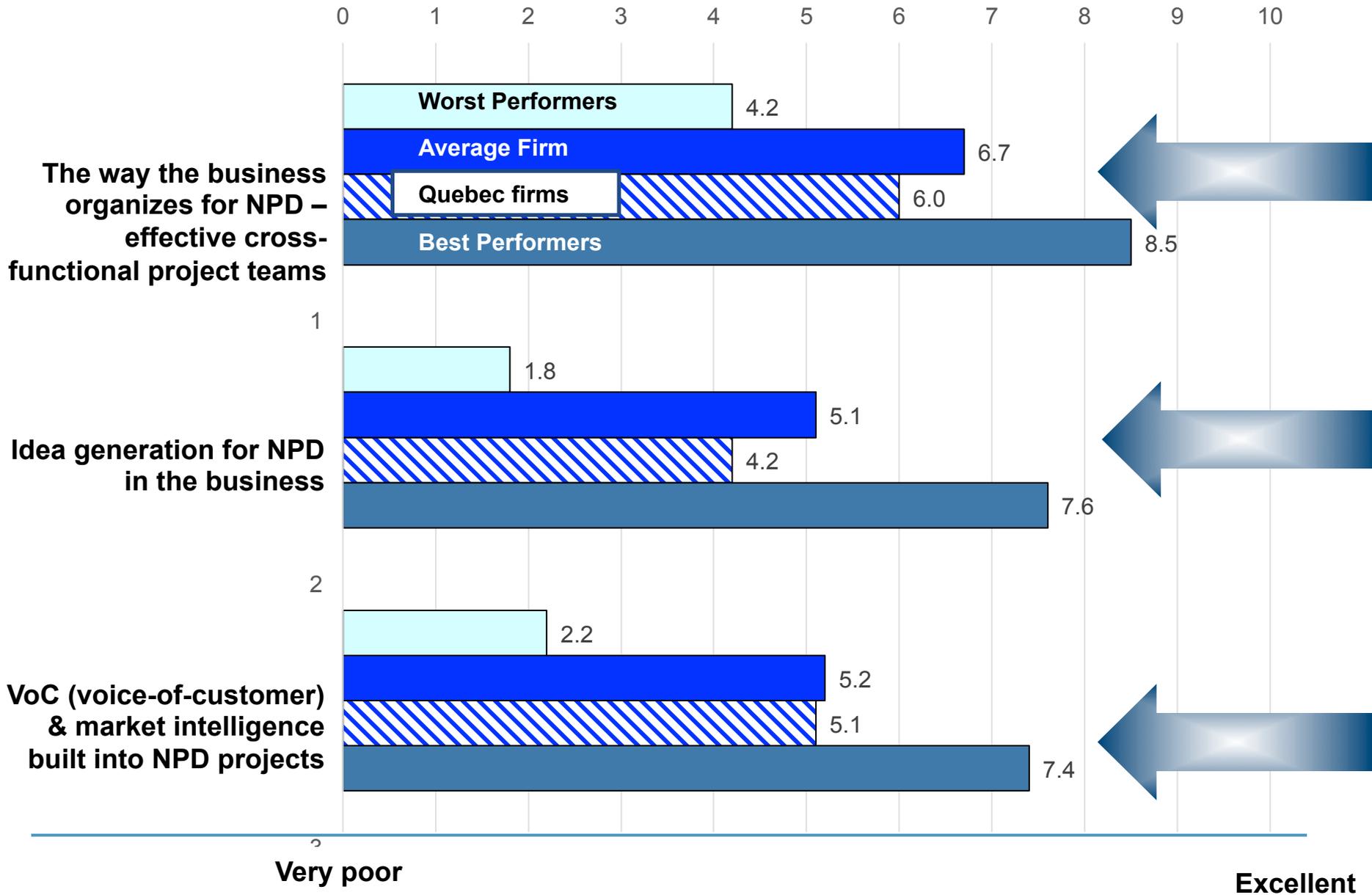
Worst and Best are top & bottom 20% of firms; US APQC data

How These QC Companies Do on Six Success Drivers



Worst and Best are top & bottom 20% of firms; US APQC data

More... How These QC Companies Do on Success Drivers

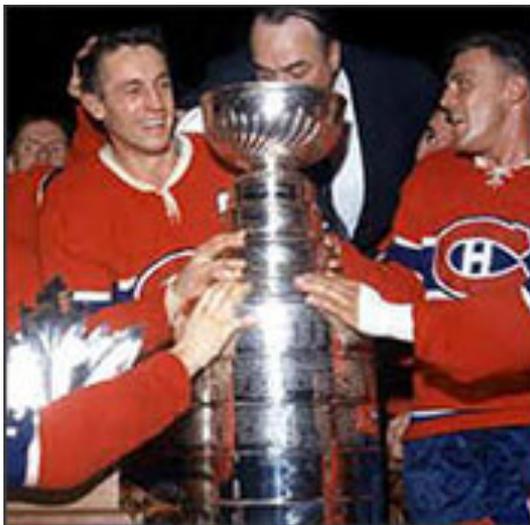


Worst and Best are top & bottom 20% of firms; US APQC data

Poor performance is due to poor NPD practices

**Pouring more money into SME firms
is not the total answer! The key is how they spend it!**

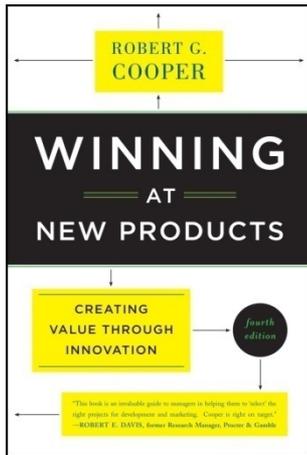
Must change the way we work... But how?



**Product innovation
is also a team
sport... it's like
trying to win the
Stanley Cup**



Winning at New Products Is Much Like Gearing Up to Win the Stanley Cup



Good players –
the Team

Solid Up-Front
Training

Hands-On
Coaching

Practice
Practice
Practice

Learning via
Post Game
Reviews

In NPD – that’s what our NRC-IRAP I2D “Big Ideas to Winning Product Developments” Initiative is all about



INDUSTRIAL RESEARCH ASSISTANCE PROGRAM

*“From Big Ideas to Winning
Product Developments”*

**DR. ROBERT COOPER &
IRAP Workshop for our
Clients**

IRAP I2D Team



National Research
Council Canada

Conseil national
de recherches Canada

Canada



IRAP helps clients Grow Through INNOVATION

This workshop and program is about

**Improving IRAP clients' abilities to
develop and launch innovative products
more successfully**

It is also about...

***Enriching IRAP toolset to help our
clients grow***

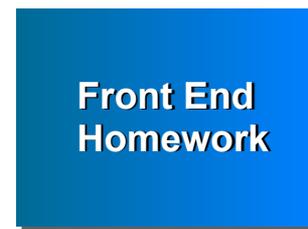
Outline of Program: Big Ideas to Winning New Products

Check #1: Project Review

- Client's scoped-out idea is reviewed, next steps discussed
- Equivalent of Gate 2 in RAPID
- Done by I2D Team, client's ITA, Cooper, Wiebe & Program Manager

Check #2: Business Case Review

- Results of homework are reviewed – the Business Case
- Equivalent of gate 3
- Done by I2D Team & Cooper, Wiebe



Training: Best Practices -- "From Big Ideas to Winning Developments"

- An intensive 1-day seminar
- With 12 ITAs
- And 12 clients (with 3 senior people per client)
- Plus IRAP Directors, Steering Group, others (about 45 people)

Get an Idea, Scope It

- Then, clients, with ITA help, define one or more NP ideas
- They do Initial Scoping – equivalent of RAPID Stage 1 – on that project
- About 2-3 months

Build Business Case

- ARP request prepared, submitted & approved (optional; at IRAP discretion)
- Client begins heavy homework phase of their project (equivalent of Stage 2 in RAPID)
 - VoC
 - Technical Assessment
 - Business Analysis
 - Ultimately culminating in Build Business Case
- The ITA coaches & monitors
- About 3 months

Development & Launch

- Full IRAP contribution request submitted after Check-In #2
- Contribution secured, at IRAP discretion
- Client progresses into full Development
- ITA continues to coach & monitor the project as it moves through Development & ultimately to Launch
- Timing: months, maybe a year or more

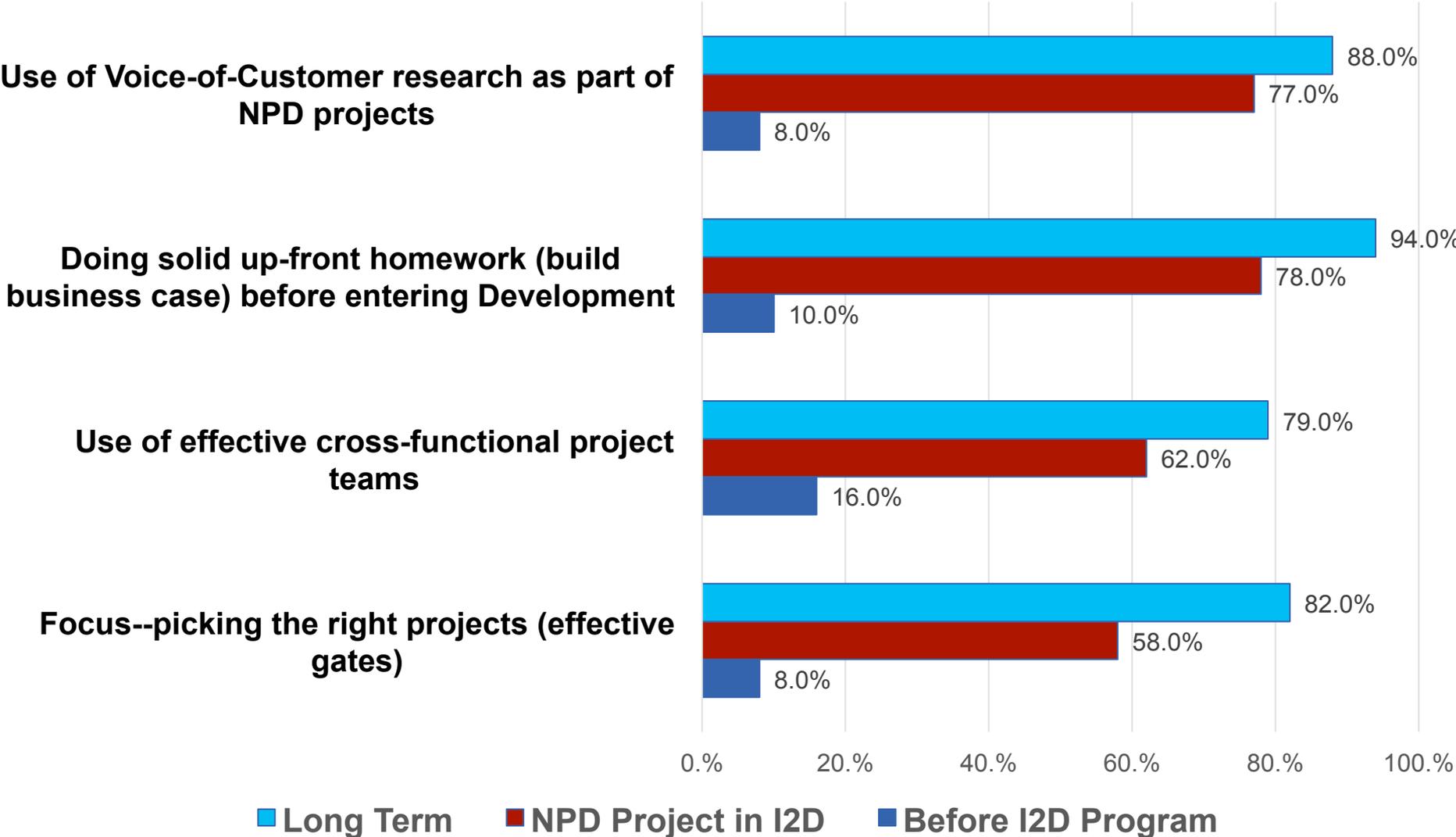
The I2D Team

- Epshtein, Ariel (Oakville)
- Keast, Kathy (Sudbury)
- Reed, Christine (Toronto)
- Singer, Janice (Ottawa)
- Witzel, Mark (Toronto)
- Mike Wiebe (coach, Ancaster ON)
- Audet-Lapointe, Patrice (Boucherville)
- Briand, Claude (Boucherville)
- Belletete, Guy (IDP, Montreal)

Long term vision: roll out a “Program” available to NRC advisors to use with select SME firms – includes learning materials and tools along with guidance and support from the I2D team

Impact of I2D Program of Firms' NPD Practices: 'Before' & 'After'

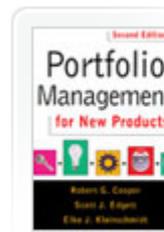
Percentage of Businesses Implementing Each NPD Best Practice





Winning at New Products: Creating Value Through Innovation, 4th Edition

- ✓ Achieve successful product innovation with the ultimate guide to new product development
- ✓ Learn how to successfully launch new projects using Stage-Gate: the most widely used idea-to-launch product innovation system



Portfolio Management for New Product, 2nd Edition

- ✓ Discover techniques to measure and optimize your portfolio investment
- ✓ Design a world-class portfolio management process.

Articles – Some available free at www.bobcooper.ca

1. R.G. Cooper, The Stage-Gate® System: A Road Map from Idea to Launch – An Intro & Summary (2013). Available on webpage. Free download.
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3. R.G. Cooper, “Formula for success”, *Marketing Management Magazine* (American Marketing Association), March-April 2006, p 21-24.
4. R.G. Cooper and S.J. Edgett, “Maximizing productivity in product innovation,” *Research Technology Management*, March-April 2008, pp 47-58.
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18. Cooper, R.G. and Sommer, A.F., “Agile-Stage-Gate: New idea-to-launch method for manufactured new products is faster, more responsive” *Industrial Marketing Management*, vol 59, Nov 2016, pp 167–180.
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