CANADA'S MOTIVATATION FOR SUPERCLUSTERS

12/16

CANADA'S RANK ON GLOBAL OECD "INNOVATION SCORECARD"

85%

OF CANADIAN TECH FIRMS HAVE LESS THAN 10 EMPLOYEES*

~50%

OF NEW CANADIAN VENTURES CLOSE WITHIN 5 YEARS**

ON AVERAGE, LARGER BUSINESSES ARE MORE PRODUCTIVE AND CONTRIBUTE MORE TO GDP, EMPLOYMENT, & SOCIAL NEEDS.**

THE GLOBAL DATA OPPORTUNITY

More data has been created in the past two years than in the entire previous history of the human race

By 2022 global internet protocol traffic, a proxy for data flows, is projected to reach 150,700 GB per second

Within five years, there will be over 70 billion smart connected devices in the world – to collect, analyze, and share data
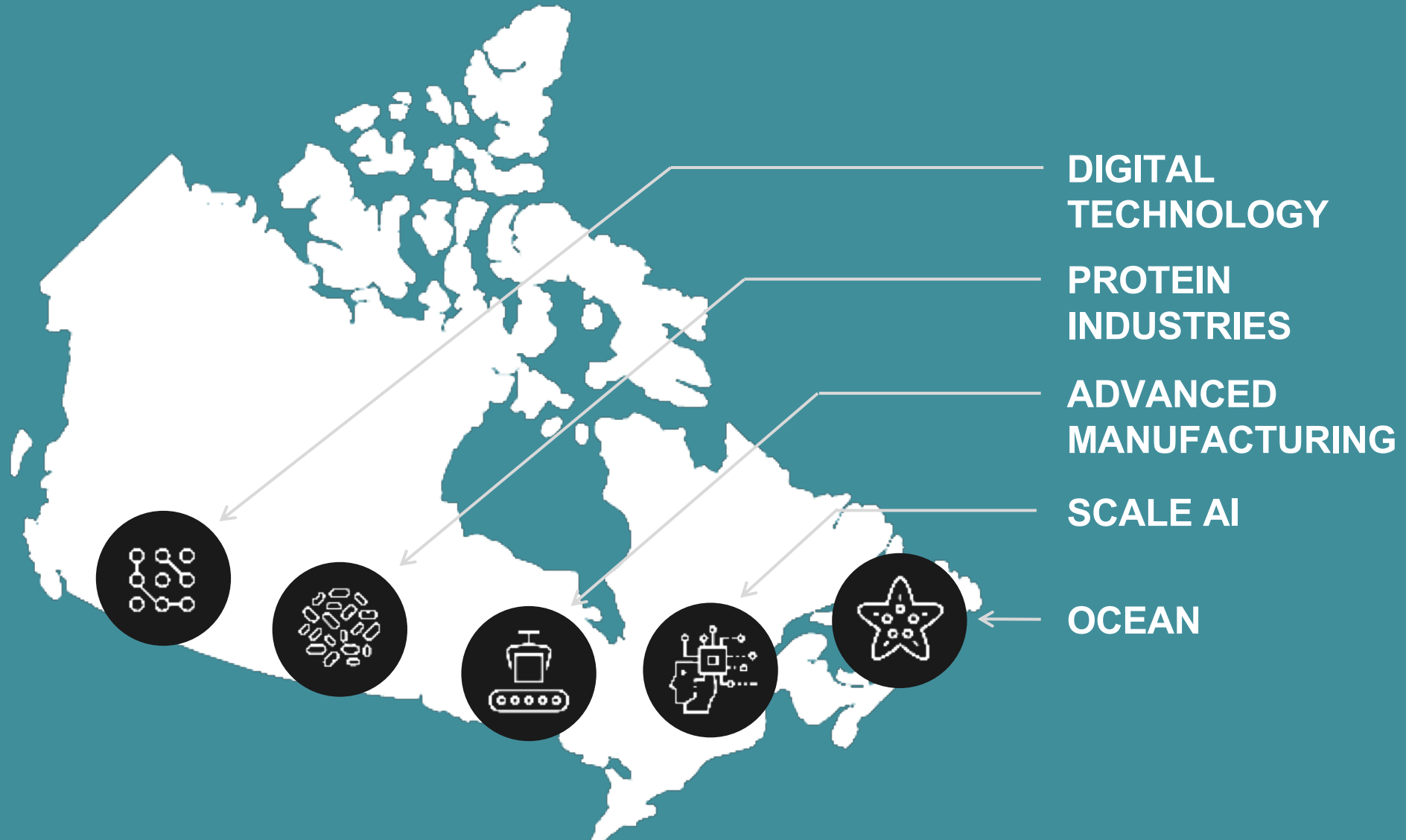
Canada's Digital Technology Supercluster

- WHO ARE YOU?

- WHAT DO YOU DO?

- HOW DO WE HELP CANADA?

DIGITAL TRANSFORMATION. GLOBAL LEADERSHIP.

Who are you? Canada's Superclusters

DIGITAL TECHNOLOGY

PROTEIN INDUSTRIES

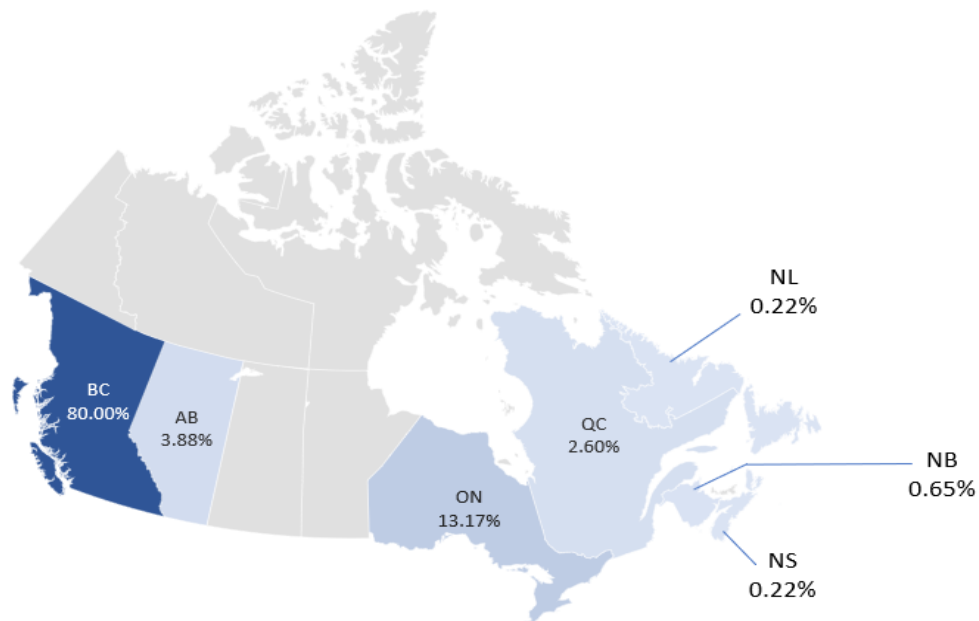**ADVANCED MANUFACTURING**

SCALE AI

OCEAN

Our Purpose

- Solving some of society and industry's biggest problems by developing, deploying and scaling digital technologies

- Investing in Canadian technologies, helping these companies grow

- During COVID, helping Canadian companies:

  - Keep employees

  - Stay active

  - Continue to develop technologies

  - Engage with prospective customers

What do you do? Member based.
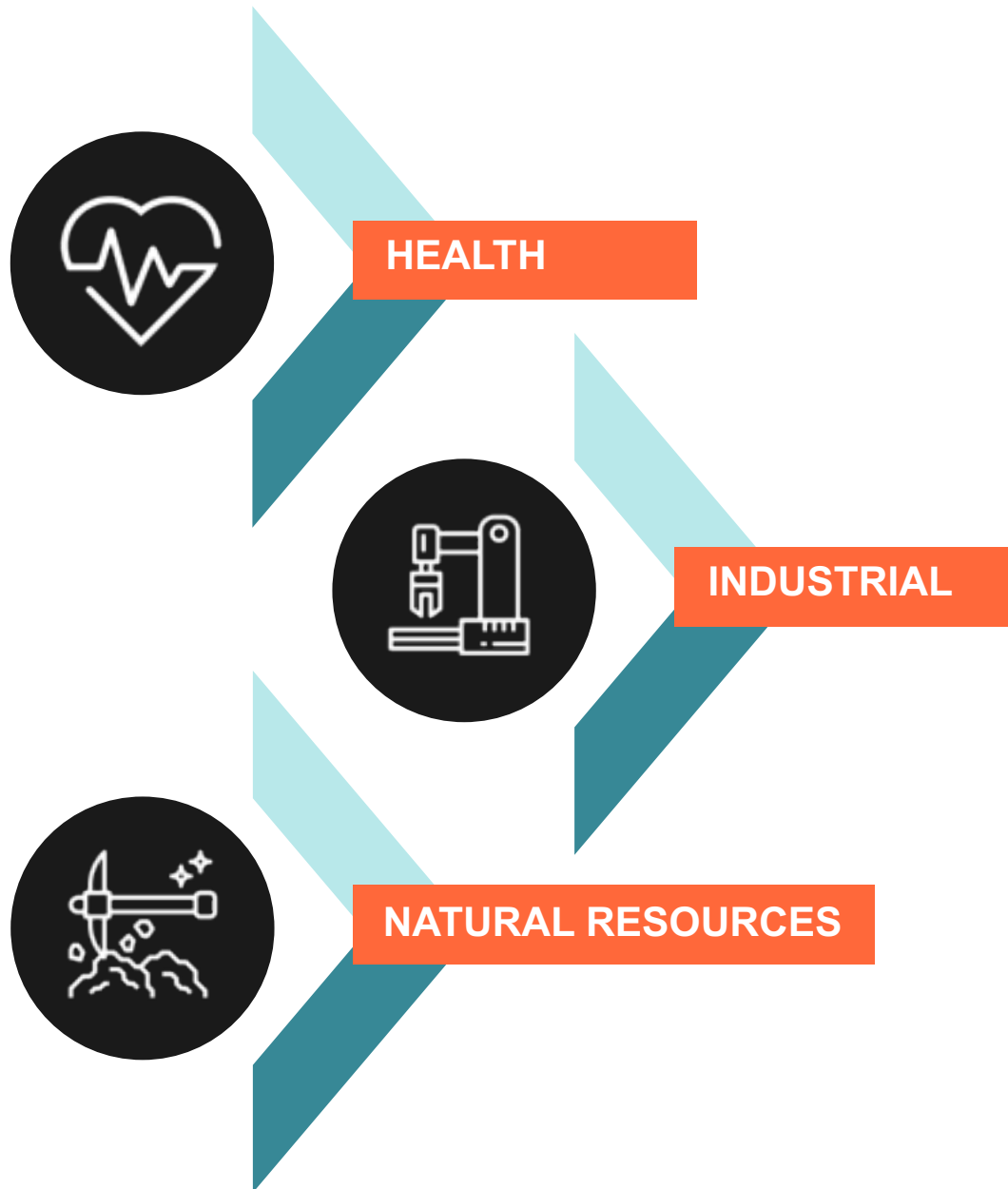
600⁺ Canadian Organizations

- STARTUPS
- CANADIAN SMES
- LARGE COMPANIES
- MULTI-NATIONALS
- UNIVERSITIES
- INSTITUTES
- COLLEGES
- RESEARCH INSTITUTIONS
- NON-PROFITS
- GOVERNMENT AGENCIES

Members and Associates Characterization:
Geographic Distribution

NL 0.22%

BC 80.00%

AB 3.88%

QC 2.60%

ON 13.17%

NB 0.65%

NS 0.22%

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What do you do?
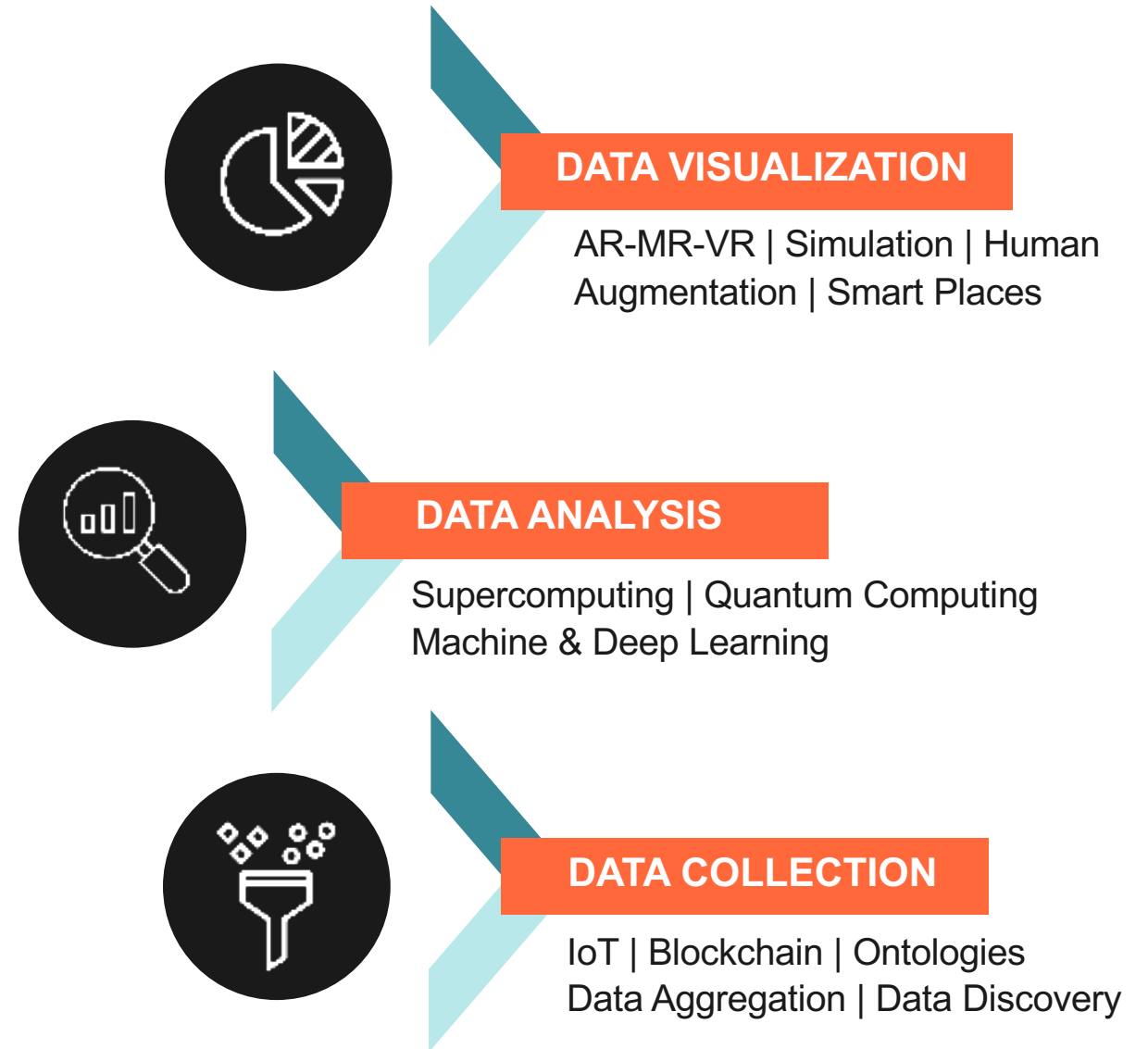
HEALTH

INDUSTRIAL

NATURAL RESOURCES

- **FOCUS ON THREE SECTORS**

- **BUILD ON REGIONAL STRENGTHS**

- **CANADIAN DIGITAL TECHNOLOGIES SOLVE BIG PROBLEMS**

- **SECTOR FOCUS MAY EVOLVE OVER TIME**

What do you do?

- **FOCUS ON AREAS OF NEED**

- **LEVERAGE OUR TECH STRENGTHS, DIVERSE CAPABILITIES, RECOGNIZED TALENT, CREATIVITY AND AMBITION**

- **PUT THESE TO WORK TO SOLVE PROBLEMS**

- **HELP BC COMPANIES BE SUCCESSFUL AND SCALE**

DATA VISUALIZATION

AR-MR-VR | Simulation | Human Augmentation | Smart Places

DATA ANALYSIS

Supercomputing | Quantum Computing
Machine & Deep Learning

DATA COLLECTION

IoT | Blockchain | Ontologies
Data Aggregation | Data Discovery

What do you do?

SOLVE PROBLEMS THROUGH DIGITAL TECHNOLOGIES THAT HELP SCALE CANADIAN COMPANIES

PROGRAMS

Health

Industrial

Natural Resources

DATA VISUALIZATION

DATA ANALYSIS

DATA COLLECTION
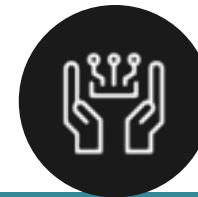
CAPACITY BUILDING

PRECISION HEALTH

DIGITAL TWINS

DATA COMMONS

What do you do? Progress to Date

- **Strong Engagement. Real Progress. Meaningful Results**

  - $90million invested over 63 projects, creating total project value of $194million

- **COVID19 Program = Immediate Response + Investing in Future.**

  - Respond to immediate needs of the pandemic and serve the economic recovery

- **Accelerated Progress.**

  - *We expect to have committed 100% of our Federal investment by March 31, 2021: two years ahead of schedule*

What do you do? Grow Canadian Companies

Almost half of industry investment is from Canadian SMEs

Research, Government or Post-Secondary Institutions
11%

Large Corporation
45%

SME
44%

Investment in Projects

DATA COMMONS

SUPERCLUSTER PROJECTS

Earth Data Store

Creating a data platform to help to measure factors contributing to "extreme weather". This will potentially lead to predicting where these events will hit hardest and what we can do to reduce their impact on communities, citizens and businesses.

SUPERCLUSTER PROJECTS

Dermatology Point-of-Care Intelligent Network

One in six Canadians will contract melanoma in their life and wait 6 months to see a specialist. This AI-powered medical imaging network reduces diagnosis time from months to days.

MetaOptima Smart Skin Analytics

CHANGE HEALTHCARE

Providence HEALTH CARE

BC CANCER

UBC

careteam

University of Victoria

DIGITAL TWINS

SUPERCLUSTER PROJECTS

Augmented Reality for Maintenance and Inspection

The application of augmented reality technologies to routine inspection systems for improved safety and performance of aircraft, ships and heavy equipment.

BOEING

FINGER FOOD | ADVANCED TECHNOLOGY GROUP

SFU SIMON FRASER UNIVERSITY

COVID-19 Project Portfolio

Program Focus Areas

Health system
Technologies that support our health systems, hospitals and healthcare workers to effectively manage resources to provide high quality care to patients.

Community health
Technology solutions that enable Canadians, their families and friends to access to care in their communities, in their homes and/or in remote locations, and to connect and support each other.

Safe Living
Enabling technologies for Canadians to live safely and securely, and to access the support and resources they need, whether at home or at work.

Diagnostics and Therapeutics
Platforms that support sharing of data, research and scientific developments and for support clinical trials in the drive to discover and deploy new vaccines, diagnostic tests and therapies for COVID- 19.

Emergency Response
Tools and technologies that can be used to predict, plan and respond to any subsequent COVID-19 waves and other crises situations.

Other Contributions
Other technology solutions that can address the effects of COVID-19.

Project Participants

Supercluster COVID-19 Program *(as of June 23)*

Objectives

- Deliver practical and meaningful technology solutions to problems created by COVID-19

- Build expertise and capacity to address and anticipate issues that may arise in future health crises

Approach

- $60M redirected to this program

- New approach and new parameters to allow for quick dispatch and fast results

Update

- Over 550 submissions since April

- Approved 30 projects with total budgets of $79.9M; Supercluster commitment of up to $45.8M

17.

COVID-19 Making a Difference (examples)

Rapid Repurposing of Drugs for COVID-19

This project uses artificial intelligence to rapidly establish links between drugs that have the potential to combat the effects of COVID-19 and fast-track life-saving treatment for patients.

Lifesaver: Preparing for a Pandemic

A forecasting platform using a dataset for predictive modelling, that can aggregate data from public sources, health authorities and medical institutions, in addition to weighing weather and travel conditions.

Making a Difference for Canada

- Digital transformation is more important than ever before

- Canada can be a global leader- we need to act now

- SMEs have been hit hard by COVID-19 and will be the engine of our recovery

- We deliver solutions to some of our biggest problems while supporting SMEs and big organizations working together

- We look beyond today – focus on in critical areas for future success: clean energy, rapid skilling, connectivity