

# INTRODUCING ARC AT UBC

UBC Advanced Research Computing – Apr 2019

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# TODAY'S SESSION

## Introduction

- Why Talk About ARC?

## What is ARC?

- The Research IT Ecosystem
- Partners in Service Delivery
- The UBC ARC Team

## What does ARC Do?

- ARC as a Function
- Key Projects
- Success Stories

## What's Next for ARC?

## Questions



## WHY TALK ABOUT ARC?





# WHAT IS ARC ?



**UBC Advanced Research Computing (ARC)** is a UBC-wide institutionally-dedicated service for researchers across all disciplines working on questions that have large data and computational needs. <https://arc.ubc.ca/>



Access to Leading Digital Research Infrastructure

Empower Researchers in all Disciplines

Foster Innovation and Discovery

Broad Community Engagement

## Digital Research Infrastructure

*(DRI) refers to the elements required to perform data-intensive and computationally-intensive research and data management, including high-performance computing, storage, high-speed networks and other tools and resources, including software, standards and data management services.”*

ISED: [Consultation: Developing a Digital Research Infrastructure Strategy](#)



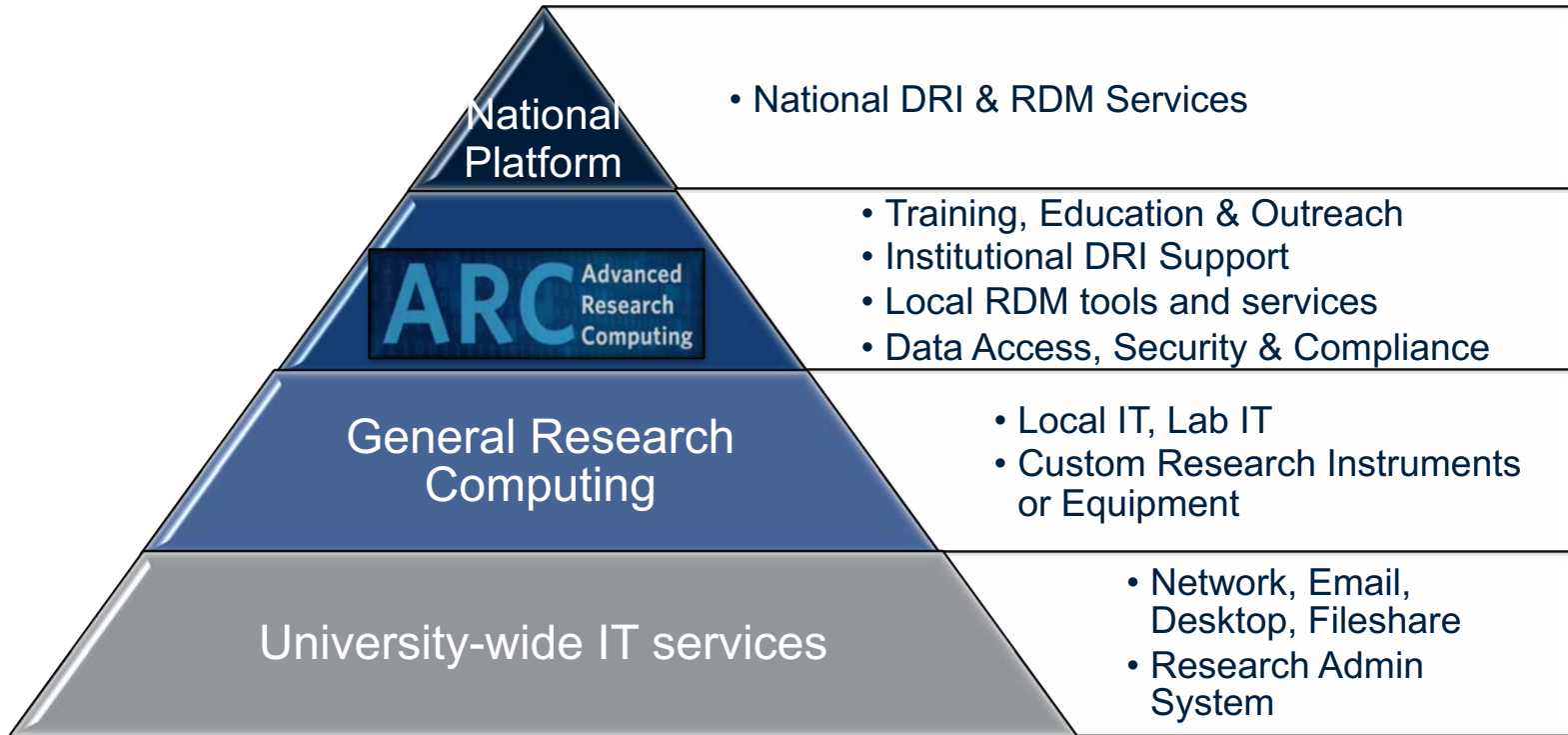
## Research Data Management

*(RDM) refers to the storage, access and preservation of data produced from a given investigation. Data management practices cover the **entire lifecycle of the data**, from planning the investigation to conducting it, and from backing up data as it is created and used to long term preservation of data deliverables after the research investigation has concluded.*

Tri-Agency Statement of Principles on Digital Data Management (December 2016), Available at [http://www.science.gc.ca/eic/site/063.nsf/eng/h\\_83F7624E.html](http://www.science.gc.ca/eic/site/063.nsf/eng/h_83F7624E.html)

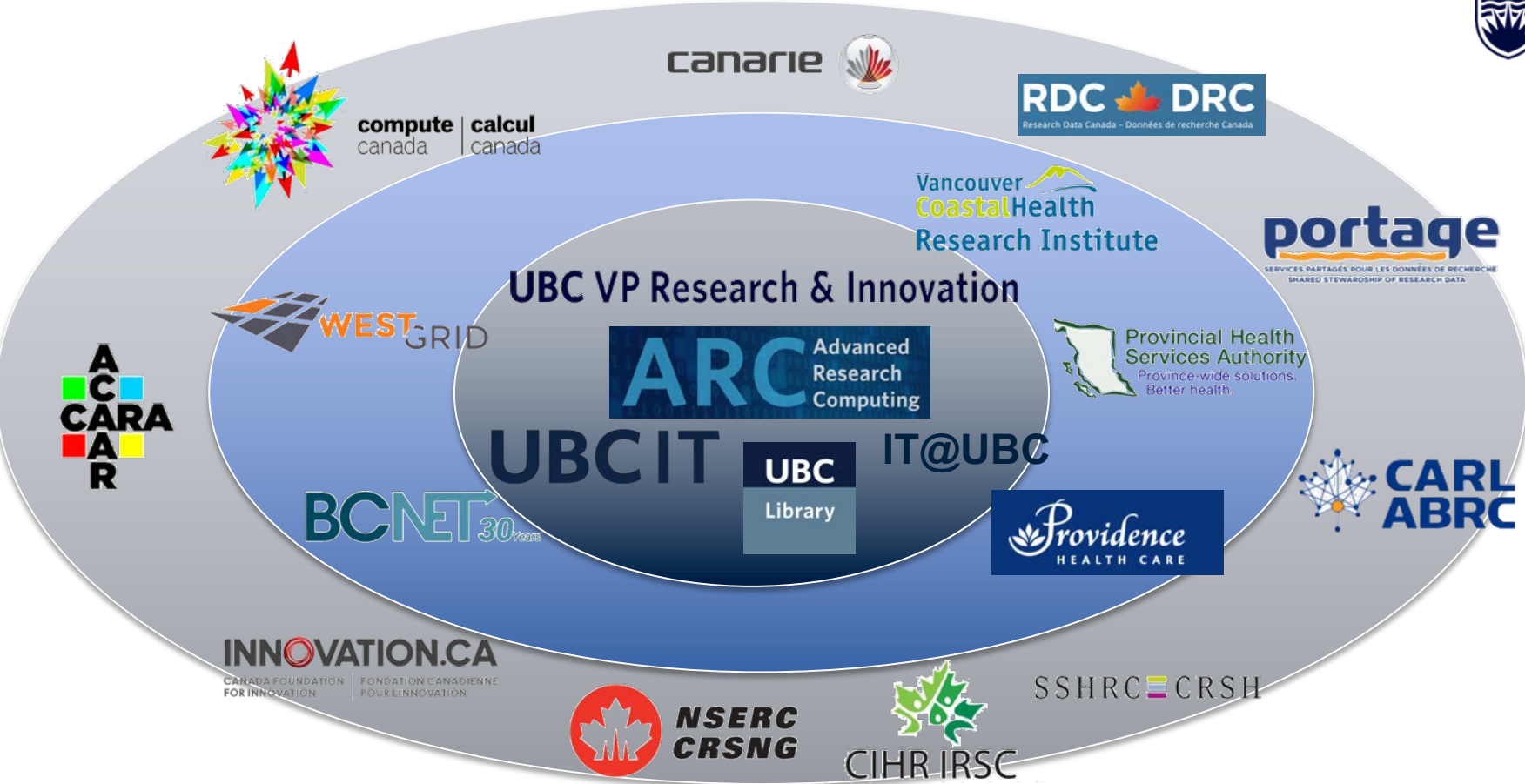


# THE RESEARCHER IT ECOSYSTEM



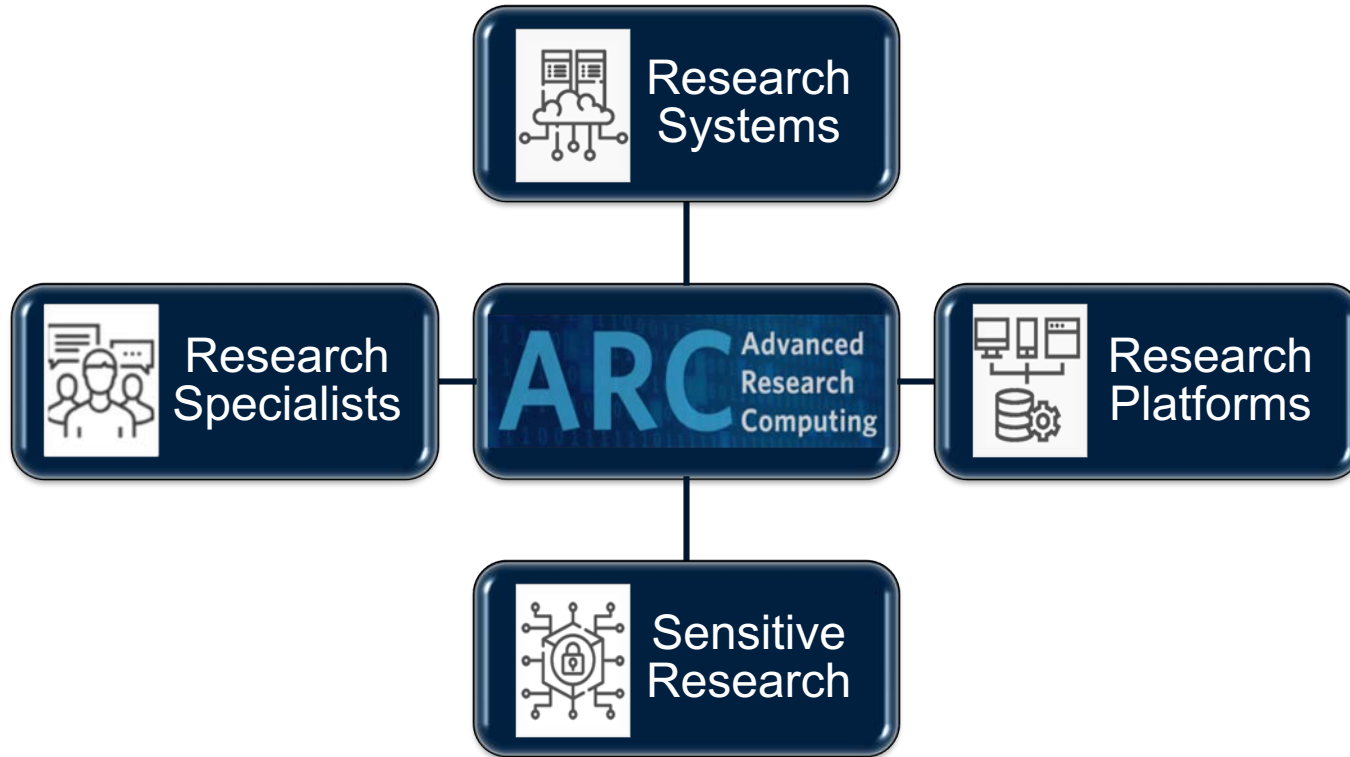


# DRI & RDM PARTNERS

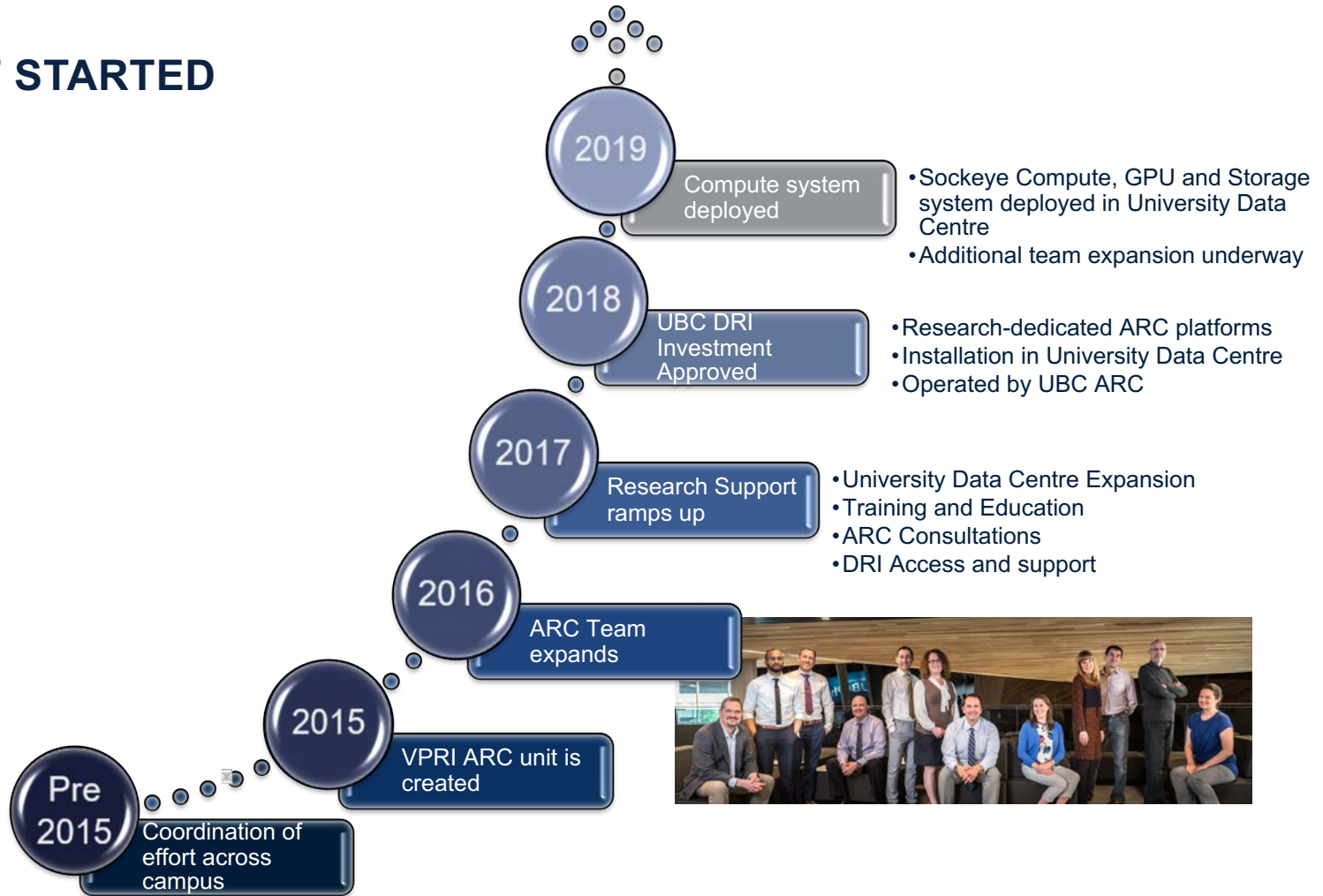




# ARC TEAM STRUCTURE



# HOW IT STARTED



# WHAT DOES ARC DO?





# EXAMPLES OF SUPPORT & SERVICES



## Research Systems

- High Performance Compute & Storage
- Cloud computing
- Access to DRI
- Advanced Systems Administration
- Technical Consultations
- UDC Expansion
- UDC System Onboarding
- Cybersecurity
- Pilot Technologies



## Research Platforms

- CFI application consultations
- Access to RDM Tools & Resources
- Data Management Planning
- Research Data Repositories
- Research consultations
- REDCap Platform
- Research Software Development



## Sensitive Research

- Institutional RDM Strategy
- RDM Policies
- Research Data Privacy and Security
- Data Access Agreements
- IT Security Standards
- Security Assessment and Planning
- Compliance Requirements



## Research Specialists

- Outreach & Education
- HPC Summer School
- RAC Allocation
- Training on the use of DRI
- Discipline-specific training
- Life Sciences and Bioinformatics Support
- Humanities & Social Sciences Community Building

## EXAMPLES OF PROJECTS



CFI IF Consultations 2017, 2020



ARC DRI Investment Approved by UBC



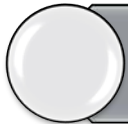
Health Research Security Standards Harmonization



Research Data Management Institutional Strategy



DRI Platform installed in University Data Centre



ARC DRI Phase 2 – Approved and Under Development



## ARC SUCCESS STORIES



#ARCOutreach  
#ResearchEngagements  
#ComputeCanada  
#ComputeCluster





## WHAT RESEARCHERS HAVE TO SAY

*"I was blown away by the helpful nature!"*

*"This resource has enabled timely analysis of very large data sets resulting in valuable data for our ongoing research program. Continued support from ARC has allowed our focus to remain on the projects in question and not on software or 'technology' maintenance. It's valuable indeed."*

*"We appreciate the collaborative work of ARC employees on our Working Group and its related efforts as by working together we are able to ensure a more cohesive IT environment for our research community."*

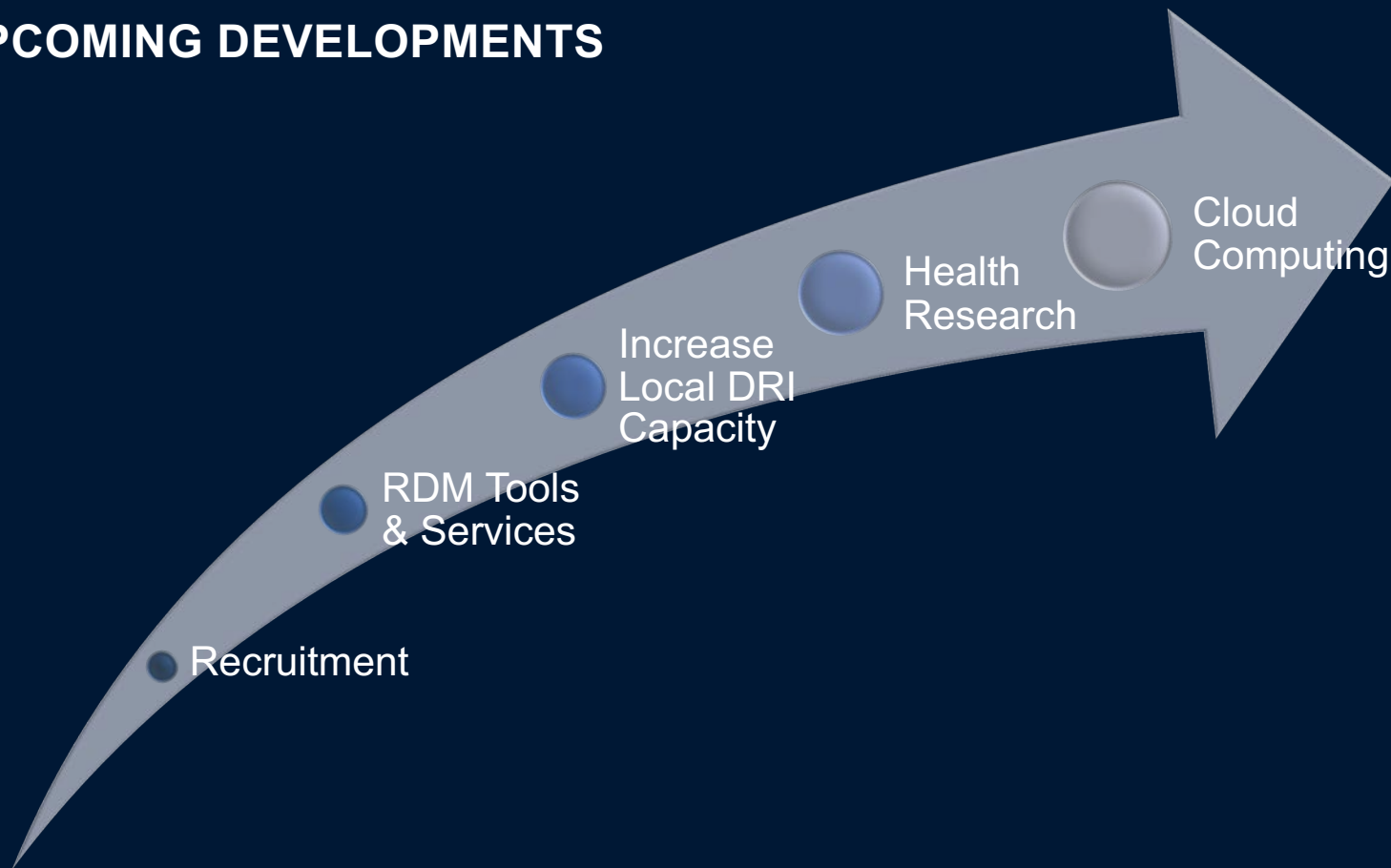
*"This was super helpful and the staff were flexible and friendly. Thanks so much!"*



**WHAT'S NEXT ?**



# UPCOMING DEVELOPMENTS





TIME FOR QUESTIONS



<https://arc.ubc.ca>

arc.info@ubc.ca





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