

# New Discovery Program

**Pre-competitive  
geoscience to address  
the discovery challenge  
in the Mt Isa Province**

Geological Survey of Queensland  
**Celebrating 150**  
Exploring Queensland's Resources **Years**

Vladimir Lisitsin  
Brisbane, 24 September 2018



# Outline

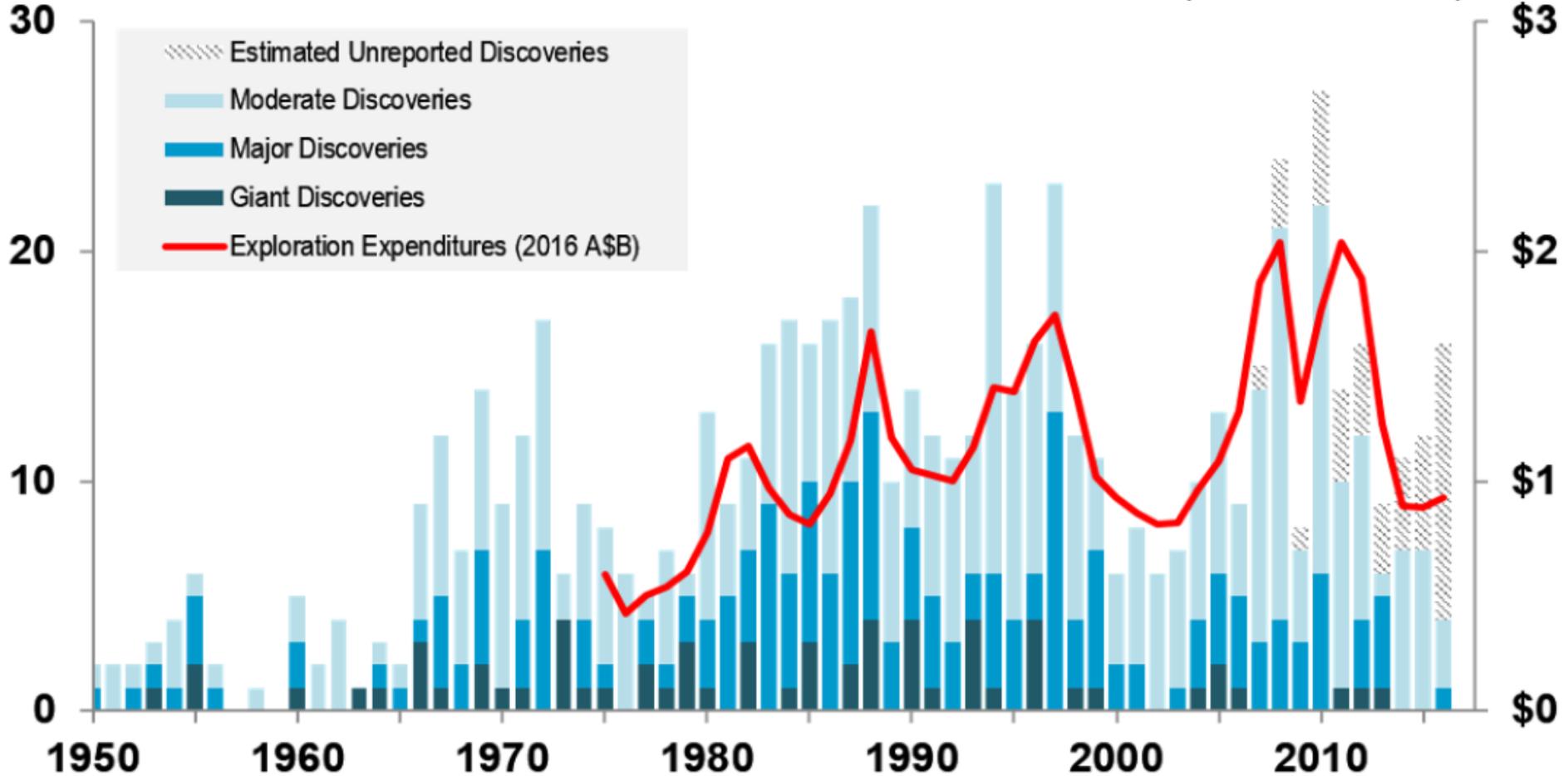
- New Discovery Program – context and overview
- New Discovery Program – current scope and structure
- Plans for future – invitation of feedback, support and collaboration

# Exploration expenditure vs discoveries

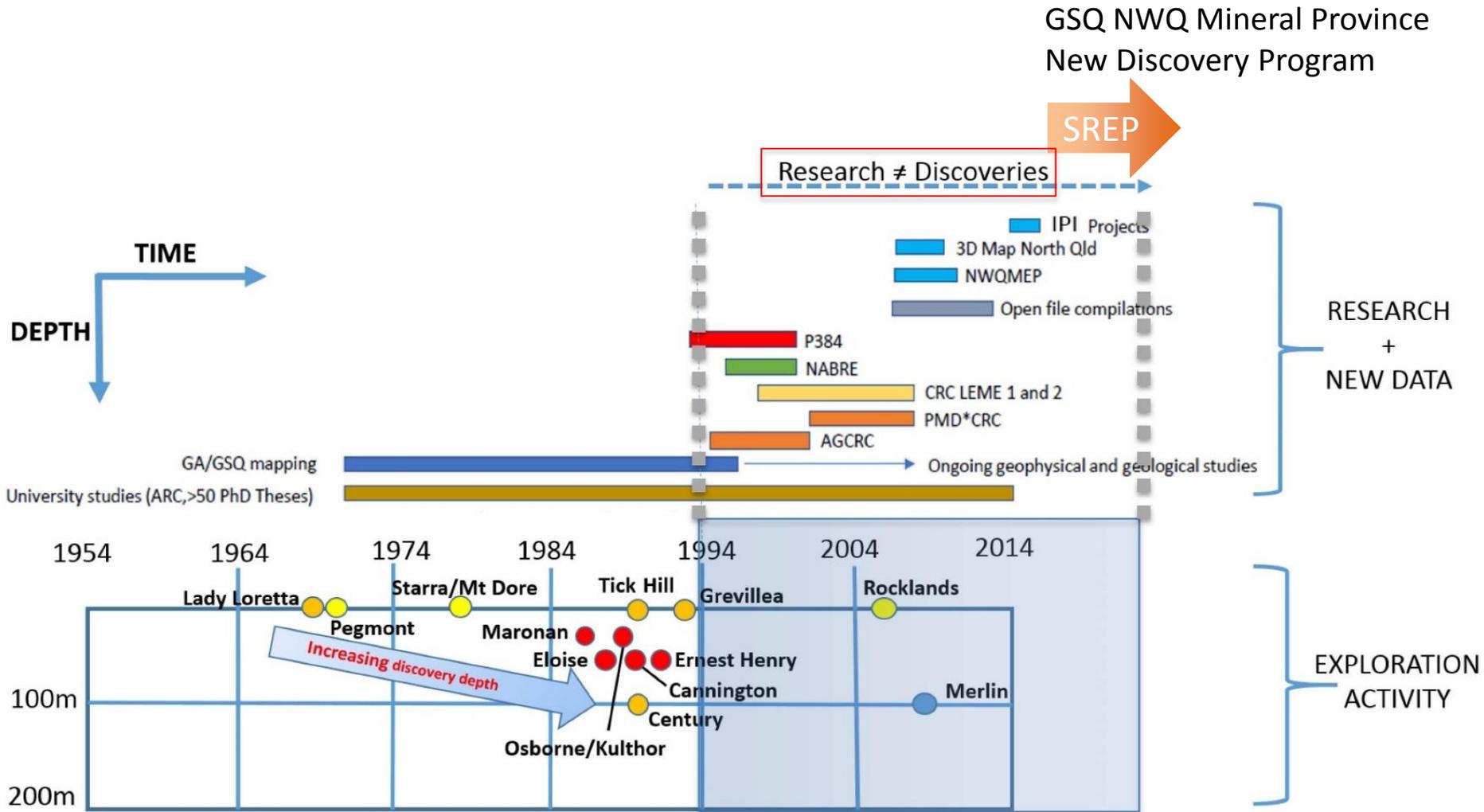
Number of new discoveries

**\$\$ spent ≠ Major discoveries**

Total Expenditures  
(2016 A\$ Billion)



# Research vs Discoveries – NW QLD



(Prof. Rick Valenta, BRC / UQ)

# Pre-competitive geoscience to assist discovery challenge

- Need a step change in pre-competitive geoscience to facilitate major discoveries
- UNCOVER Roadmap (August 2017)
- Geoscience Australia – Exploring for the Future (2016-20)
- MinEx CRC (commenced in 2018)

**MinEx CRC**  
3D DRILLING

VALUE PROPOSITION FOR MINING COMPANIES AND INDUSTRY PARTNERS

UNLOCKING AUSTRALIA'S HIDDEN POTENTIAL.

**MinEx CRC: 3D Drilling For Discovery And Definition Of Mineral Deposits**

MinEx CRC will build on the technical success of the DET CRC to address declining mineral discovery rates in Australia by utilizing novel coiled tubing drilling and related technologies to revolutionise mineral exploration by:

- acquiring previously unattainable data on prospective rocks under deep, barren cover;
- developing cheaper, safer and more environmentally-friendly methods to discover, analyse and drill-out deposits, and;
- optimising conventional drilling.

**Status of bid**

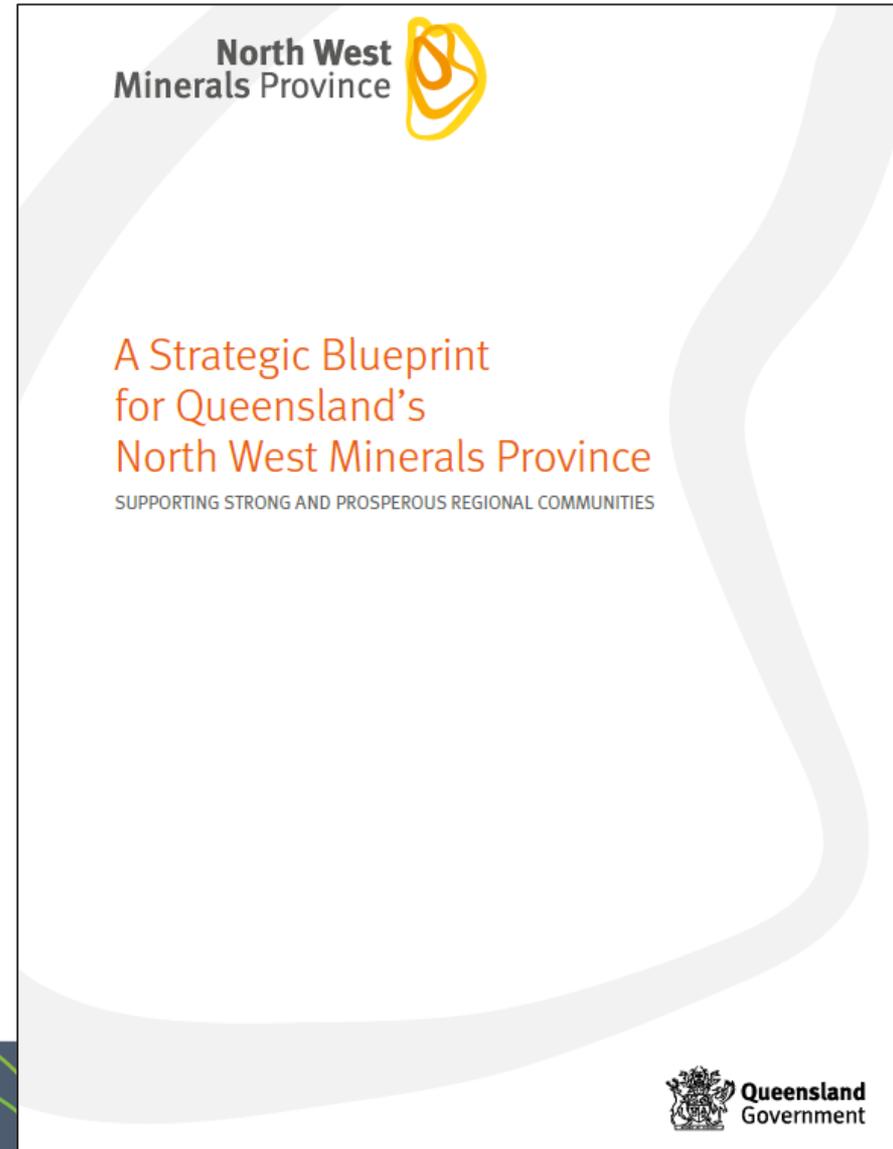
MinEx CRC was successful at Stage 1 and has been shortlisted to the final stage (Stage 2). The detailed Stage 2 application is due for submission by 13 December 2017. MinEx CRC is seeking additional industry partners ahead of this submission. The written submission will be followed by an interview with a panel appointed by the Department of Industry, Innovation and Science in February 2018 and successful applicants are expected to be announced in March 2018.

An industry roadmap.

# QLD Government response in NW QLD

## ***Deliver minerals and natural gas geoscience data systems and promote the region's investment potential:***

- Improve pre-competitive geoscientific data
- Establish a Minerals Collaborative Exploration Program
- Develop new geological databases
- Initiate gas exploration in proximity to the Province
- Promote the investment potential of the Province



# Strategic Resources Exploration Program

**SREP 2017-21**

Geoscience  
Data  
Modernisation

\$7.125M

**New  
Discovery  
Program**

**\$11.6M**

Collaborative  
Exploration  
Initiative

\$3.6M

Investment  
Attraction

\$1.2M

Frontier  
Basin Gas  
Exploration

\$3.6M

Geophysics

New geophysical surveys

Geochemistry

Surveys, case studies, research

Synthesis

Compilations, research

Collaboration

Collaborative contributions

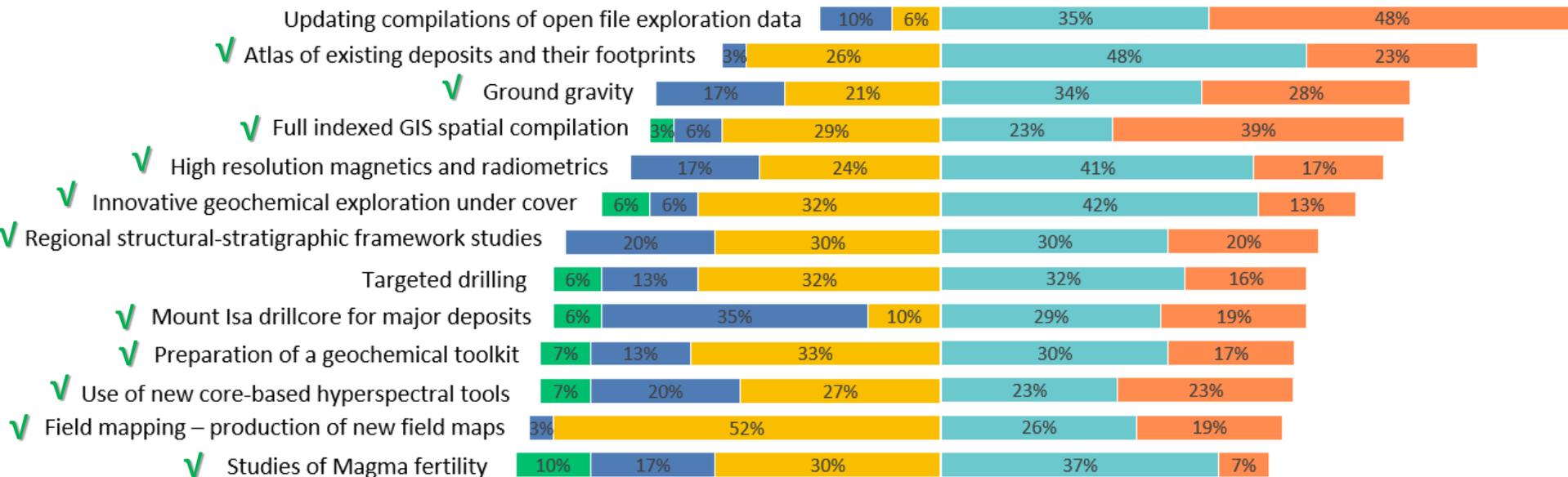
# New Discovery Program – developments

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Industry survey – August-September 2017:



# New Discovery Program – developments

- Program development: GSQ-Bryan Research Centre/UQ (Prof. Rick Valenta); strategic collaborative partnerships; industry consultation
- **2017-18** – GSQ set up 4 collaborative agreements (BRC/UQ, CSIRO, JCU, CODES/UTas); 8 projects commenced:
  - Geochemical toolkit (Adelaide Uni-GeoChem Pacific-GSQ, **completed**)
  - Research compilation and synthesis (BRC/UQ-GSQ, **completed**)
  - Machine Learning pilot (DATA61/CSIRO, **completed**)
  - Cobalt and HREE mineral systems (Ken Collerson **completed**)
  - Tick Hill gold deposit (EGRU/JCU, till 2021)
  - Magma fertility of Mary K Domain (EGRU/JCU, till 2021)
  - Mineral geochemistry vectoring (CODES/Utas, till 2021)
  - North Cloncurry airborne magnetic-radiometric survey (till late 2018)

# New Discovery Program – developments

## Since July 2018:

- 6 new projects commenced:
  - Deposit Atlas of Northwest Queensland (BRC/UQ)
  - Characterisation of the Cloncurry mineral system (CSIRO)
  - Hydrogeochemistry of the Mt Isa Province (CSIRO-GSQ)
  - Igneous geology of the Mary Kathleen Domain (GSQ)
  - Virtual and physical reference collection of NWQ mineral systems (GSQ)
  - Central Isa airborne magnetic-radiometric survey (GSQ – contract procurement in progress)
- Planning and preparations under way for more geophysical surveys and research projects

# New Discovery Program – way forward

- Industry Advisory Panel established to provide strategic advice to GSQ and assist the Program in achieving its goals
- Regular industry and public consultation forums to communicate the progress and results of the New Discovery Program
  - GSQ Digging Deeper 2018 – Brisbane, 5 December 2018
  - GSQ NWQ technical workshop – Brisbane, 6 December 2018
  - The New Discovery Program workshop – Mt Isa / Cloncurry, April 2019 (TBC)
- Ongoing discussions to establish and expand collaborative work on the New Discovery Program

# SUMMARY

- The New Discovery Program aims to facilitate mineral exploration in NW QLD
- Close collaboration between GSQ, industry and academia is essential (reference deposit collections and datasets; access to deposits / ground, research)
- Open invitation – engage and collaborate!