Are we finding enough copper and gold to meet future demand ?

The answer(s) might surprise you !

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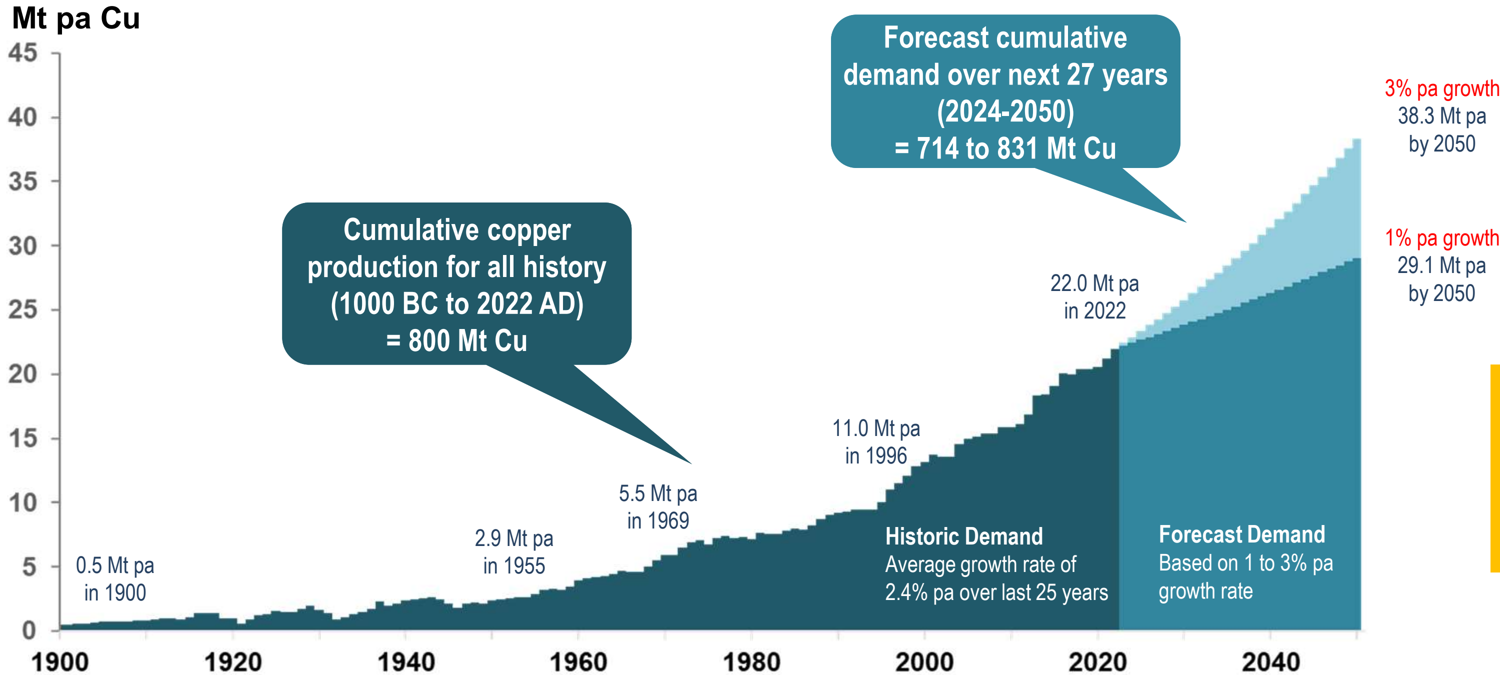
International Mining and Resource Conference (IMARC)
22nd October 2025, Sydney

THE NEED TO FIND MORE METAL

Primary copper production for World: 1900-2050



BHP's latest forecast is 2.6% pa to 2035

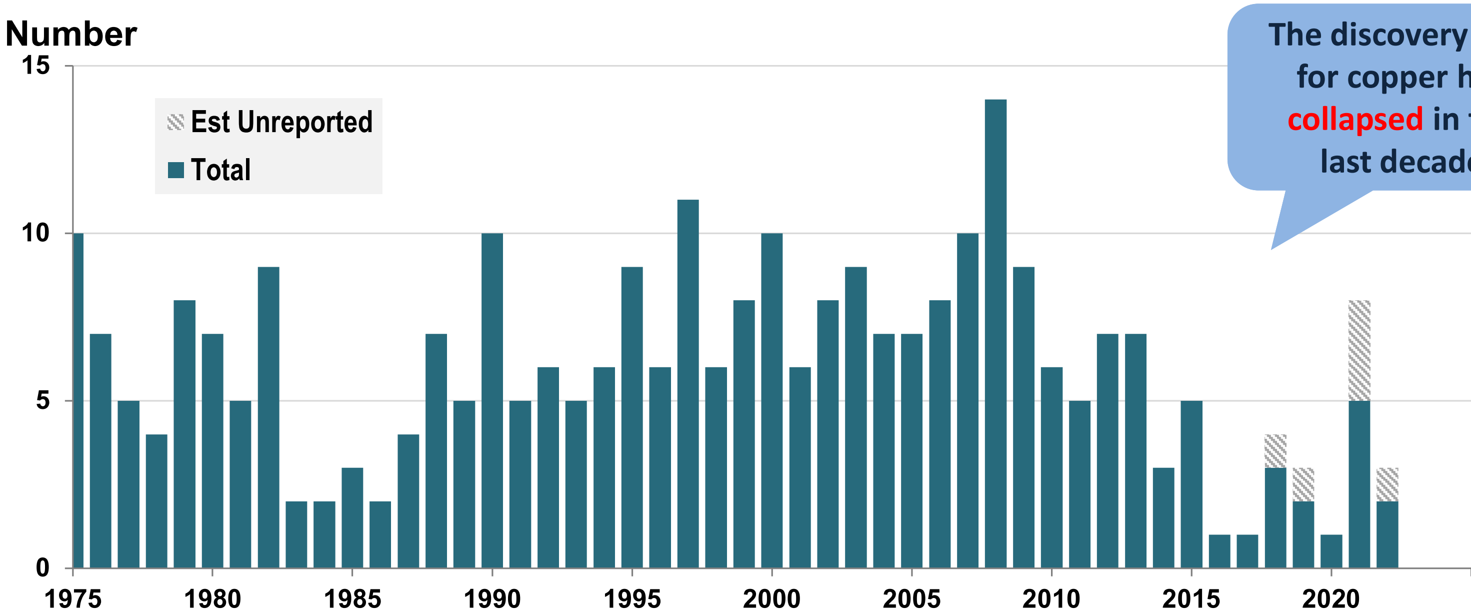
World's demand for copper has been doubling every 20-30 years

Over the next 25-30 years the World is going to mine more copper than what has been mined in all history !

Source: Historical data from USGS Dec 2023

ARE WE MAKING ENOUGH NEW DISCOVERIES ?

Number of Copper Discoveries: World : 1975-2023



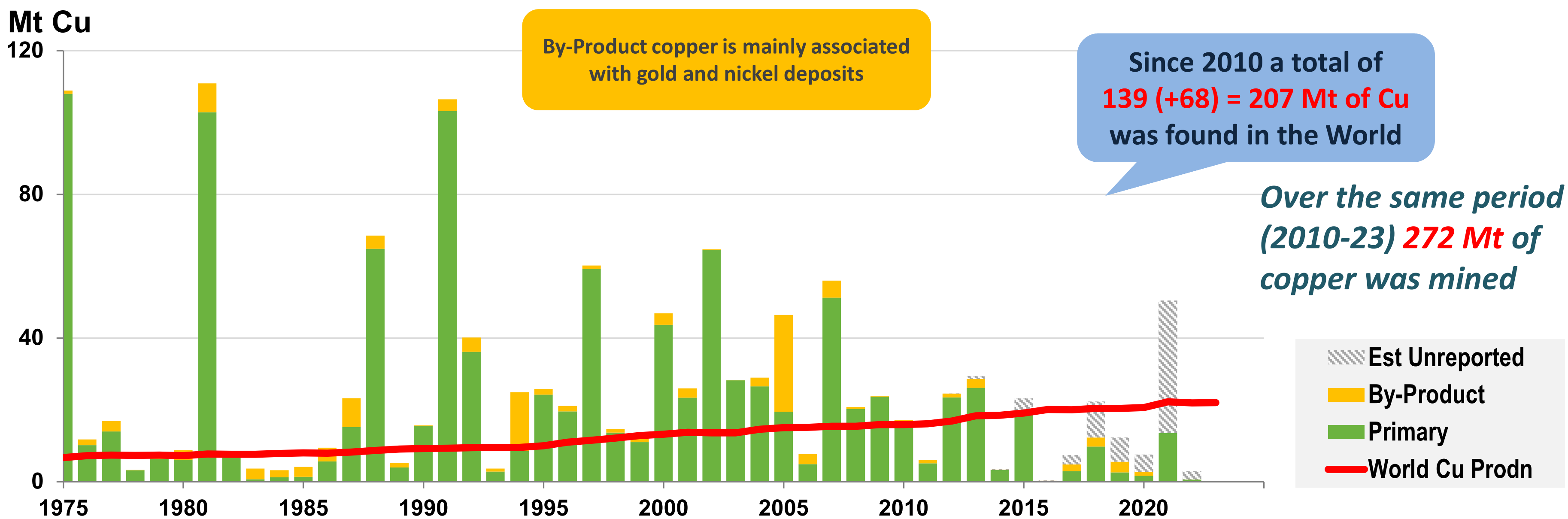
The discovery rate for copper has collapsed in the last decade

Only 48 (+6) copper deposits have been found since 2010

Note: Based on deposits **>100kt Cu**

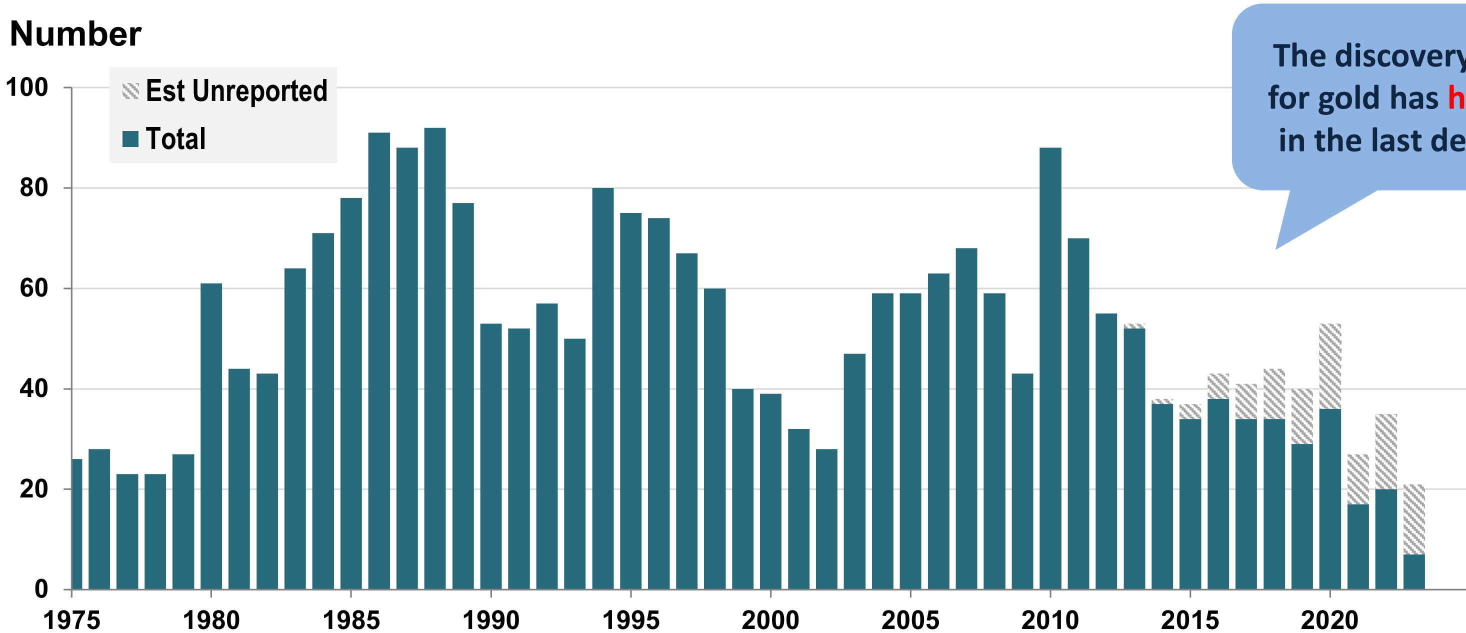
Source: MinEx Consulting © October 2025

Tonnes of Copper Discovered: World : 1975-2023
Primary and By-Product



Note: Based on primary copper deposits >="Moderate" in-size. i.e. >100kt Cu-eq
Includes an adjustment for unreported discoveries and resource growth in recent years

Number of Gold Discoveries: World : 1975-2023



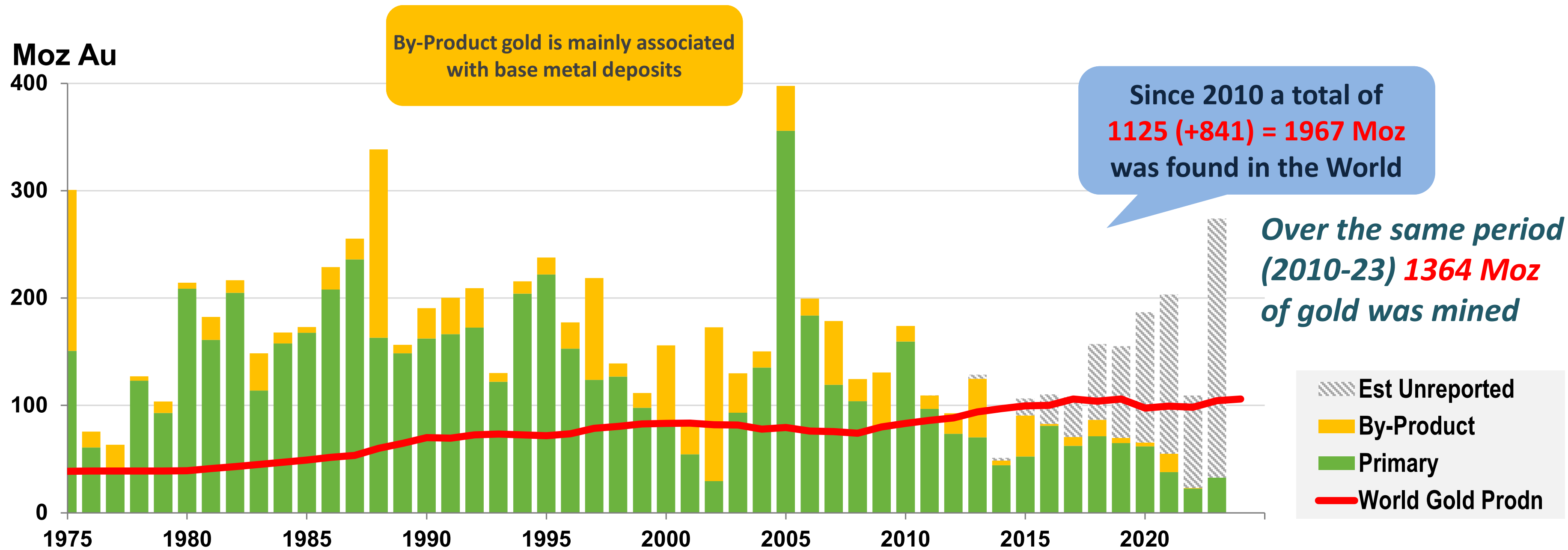
The discovery rate for gold has halved in the last decade

551 (+94) = 645 gold deposits have been found since 2010

Note: Based on deposits **>100koz Au**

Source: MinEx Consulting © October 2025

Moz of Gold Discovered: World : 1975-2023
Primary and By-Product



Note: Based on primary copper deposits >="Moderate" in-size. i.e. >100kt Cu-eq
Includes an adjustment for unreported discoveries and resource growth in recent years

Source: MinEx Consulting © October 2025

Are we finding enough copper and gold to meet future demand ?

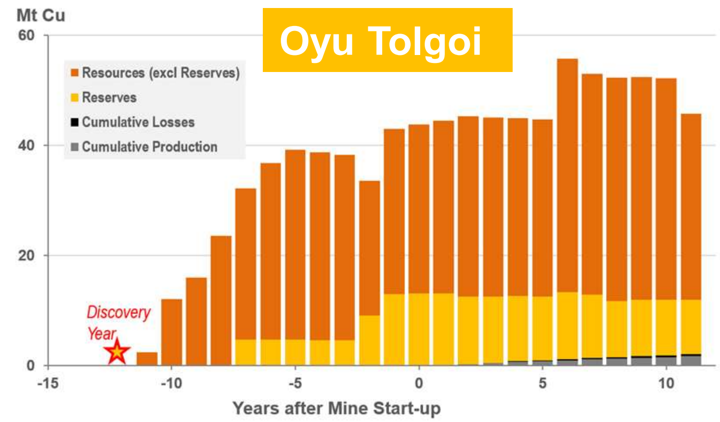
the answer is …..

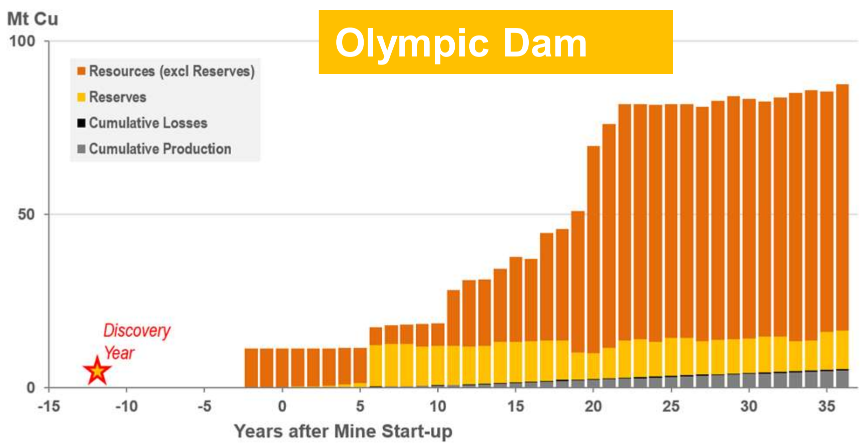
NO ! Industry is not making enough new discoveries to replace what is being mined. This is especially so for copper.

WHAT'S THE RESOURCE GROWTH STORY FOR "OLD" DISCOVERIES ?

Ie Pre-existing Mines and old discoveries made (say) prior to 2010

Existing Mines also grow over time !

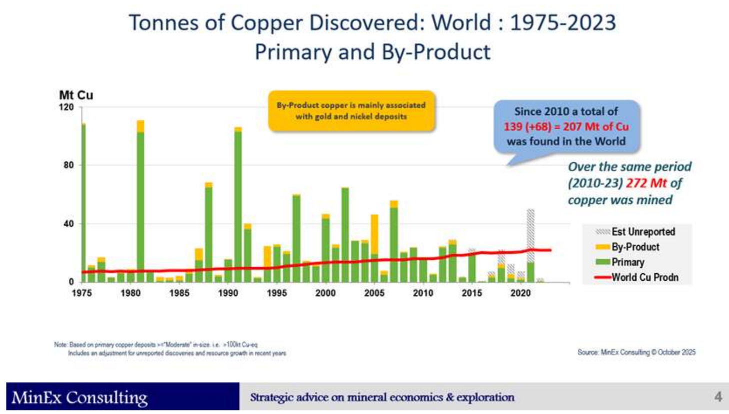


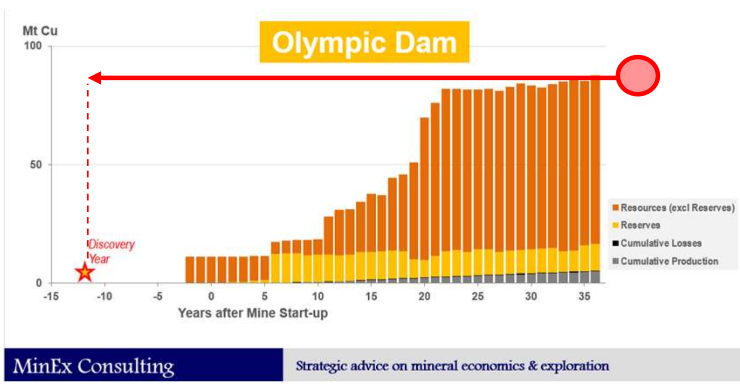


The question is .... How do we take into account the extra metal found over time ?

Source: MinEx Consulting analysis of Company Reports, Oct 2024

Definitions used for Discovery





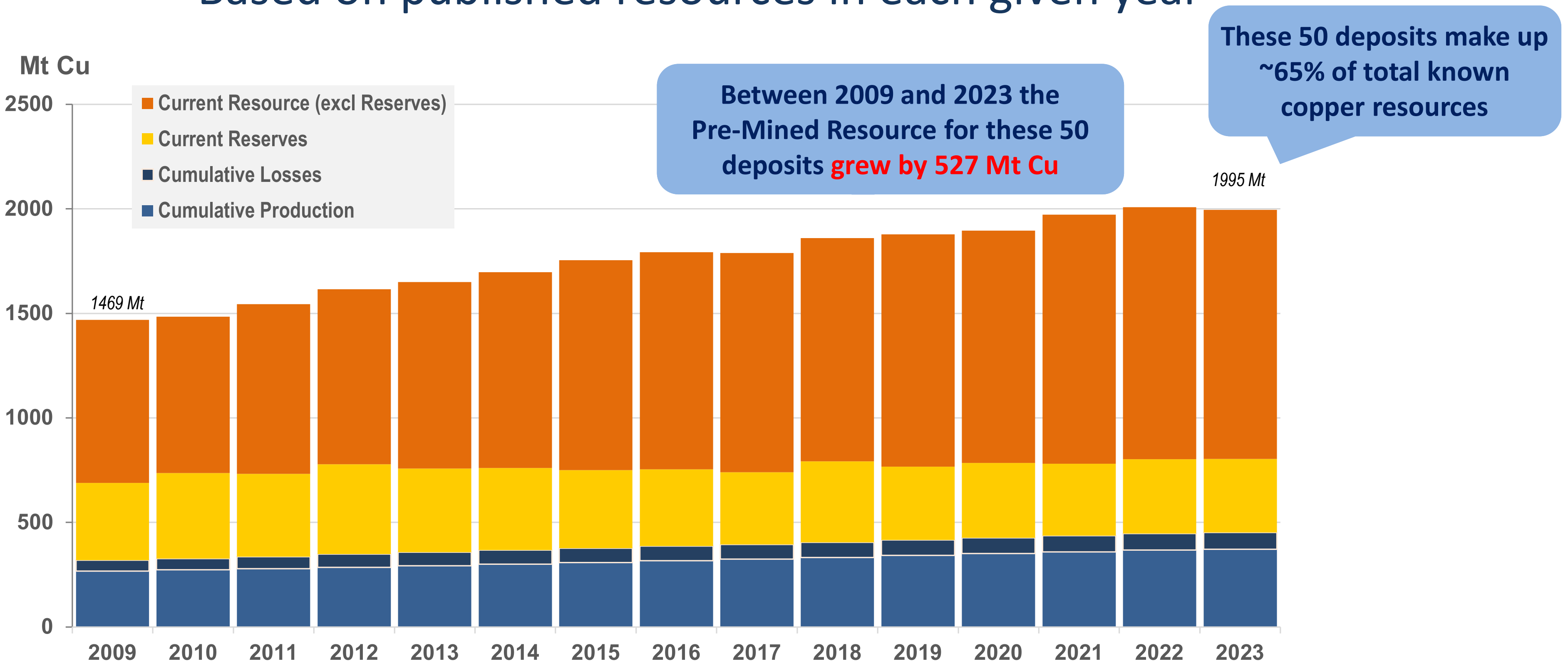
The Discovery Date is defined as the year when the economic potential of the deposit was first recognised (typically through drilling)

The Size of the Discovery is based on the <u>latest</u> estimate of the pre-Mined Resource (i.e. Current Resource + Cumulative Production + Cumulative losses)

However … this approach ignores the timing & value of subsequent exploration efforts to grow the discovery

… so, an alternative approach is to only count the amount of metal booked to inventory in any given year

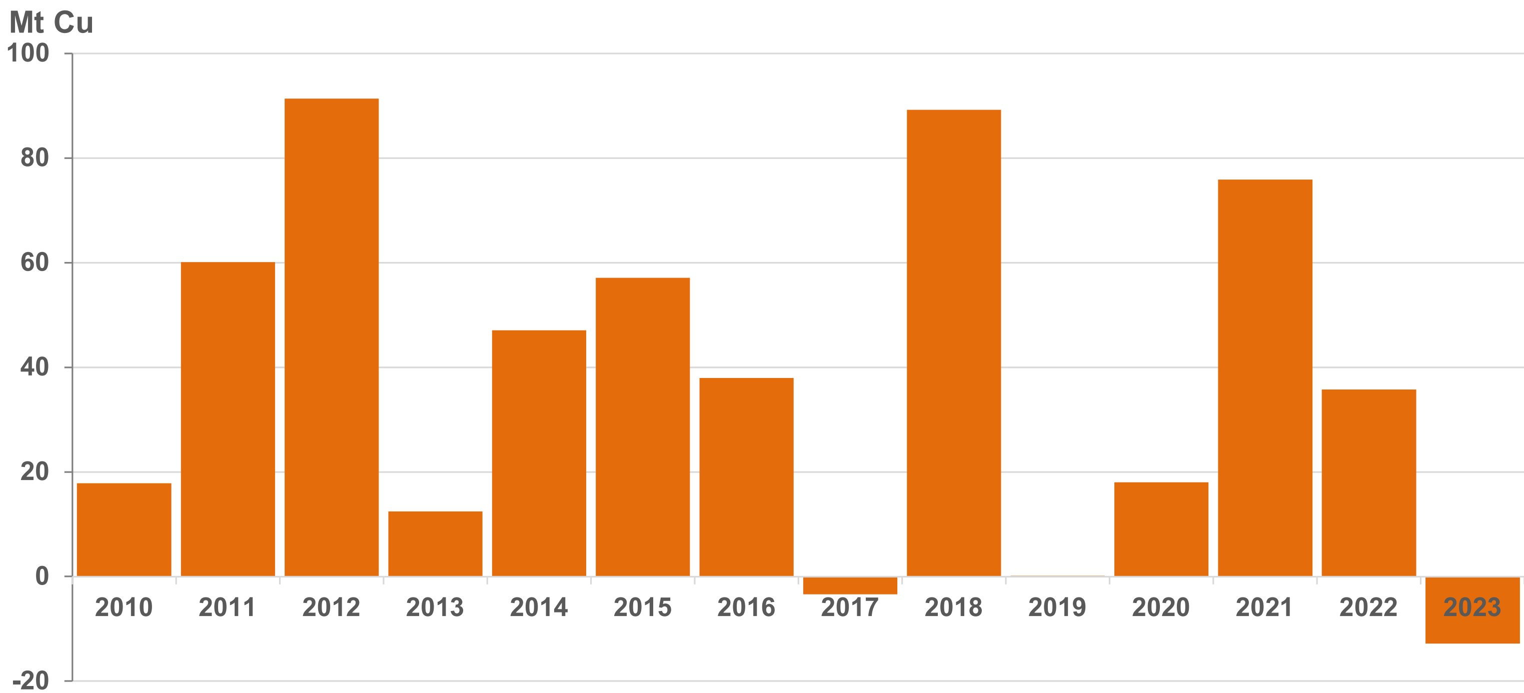
Cumulative Copper Metal for 50 giant copper deposits found prior to 2010
Based on published resources in each given year



Note: Based on a sample of Primary copper deposits containing a pre-mined Resource >10 Mt Cu and account for ~65% of total known resources for all primary copper deposits found prior to 2010

Source: MinEx Consulting © July 2024

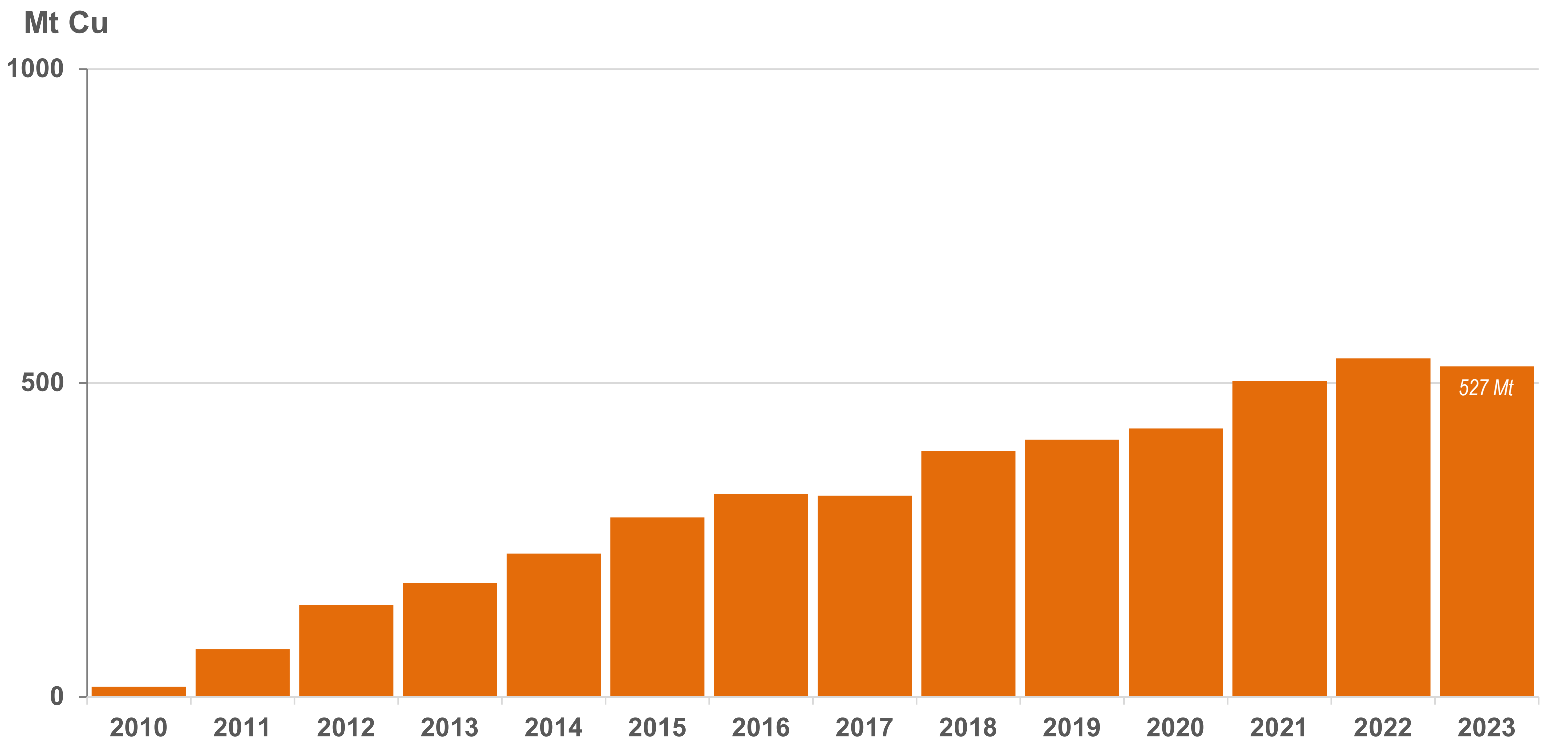
Year-on-year incremental change in the Pre-Mined Resource for 50 giant copper deposits found before 2010



Note: The pre-2010 data is based on a sample of 50 Primary copper deposits
containing a pre-mined Resource >10 Mt Cu

Source: MinEx Consulting © July 2024

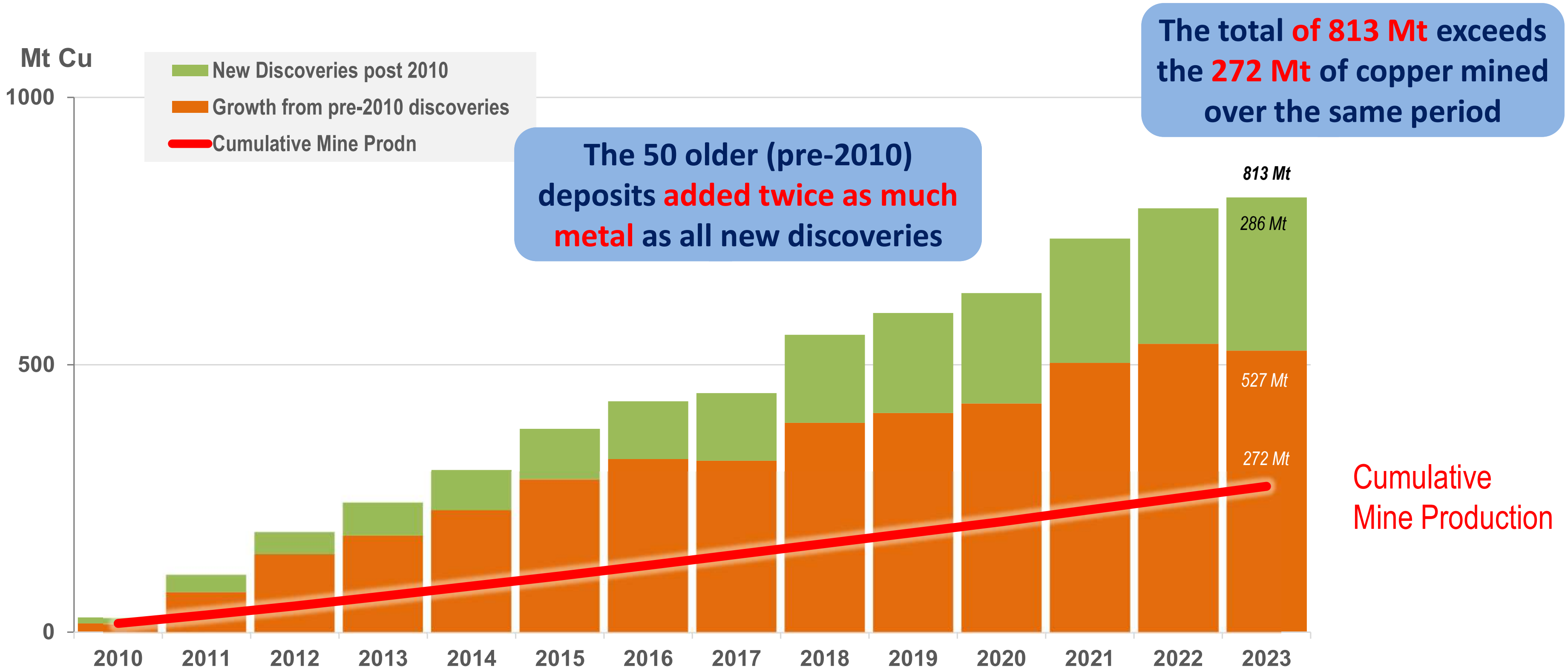
Cumulative increase in the Pre-Mined Resource for 50 giant copper deposits found before 2010



Note: The pre-2010 data is based on a sample of 50 Primary copper deposits containing a pre-mined Resource >10 Mt Cu

Source: MinEx Consulting © July 2024

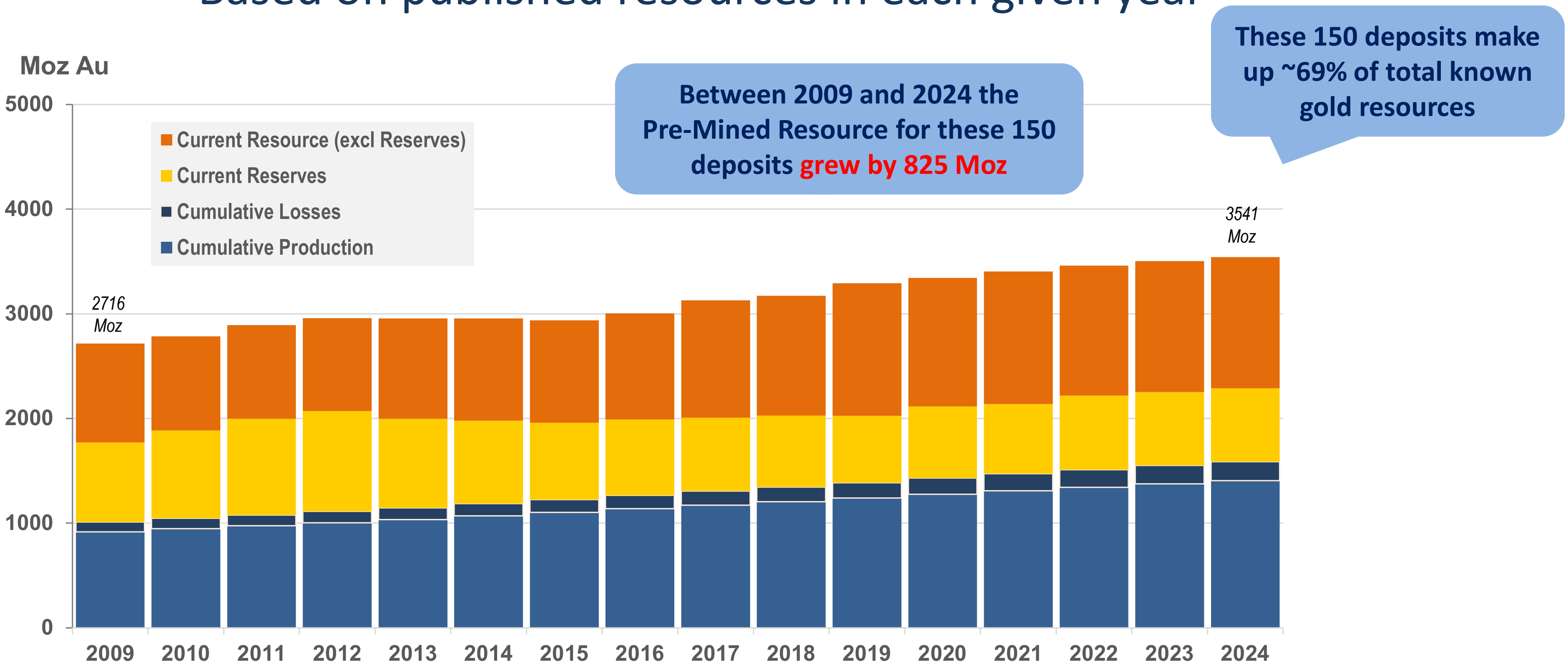
Cumulative increase in Pre-Mined Resource for pre- and post-2010 discoveries
World : Copper : 2010-2023



Note: The pre-2010 data is based on a sample of 50 Primary copper deposits containing a pre-mined Resource >10 Mt Cu

Source: MinEx Consulting © July 2024

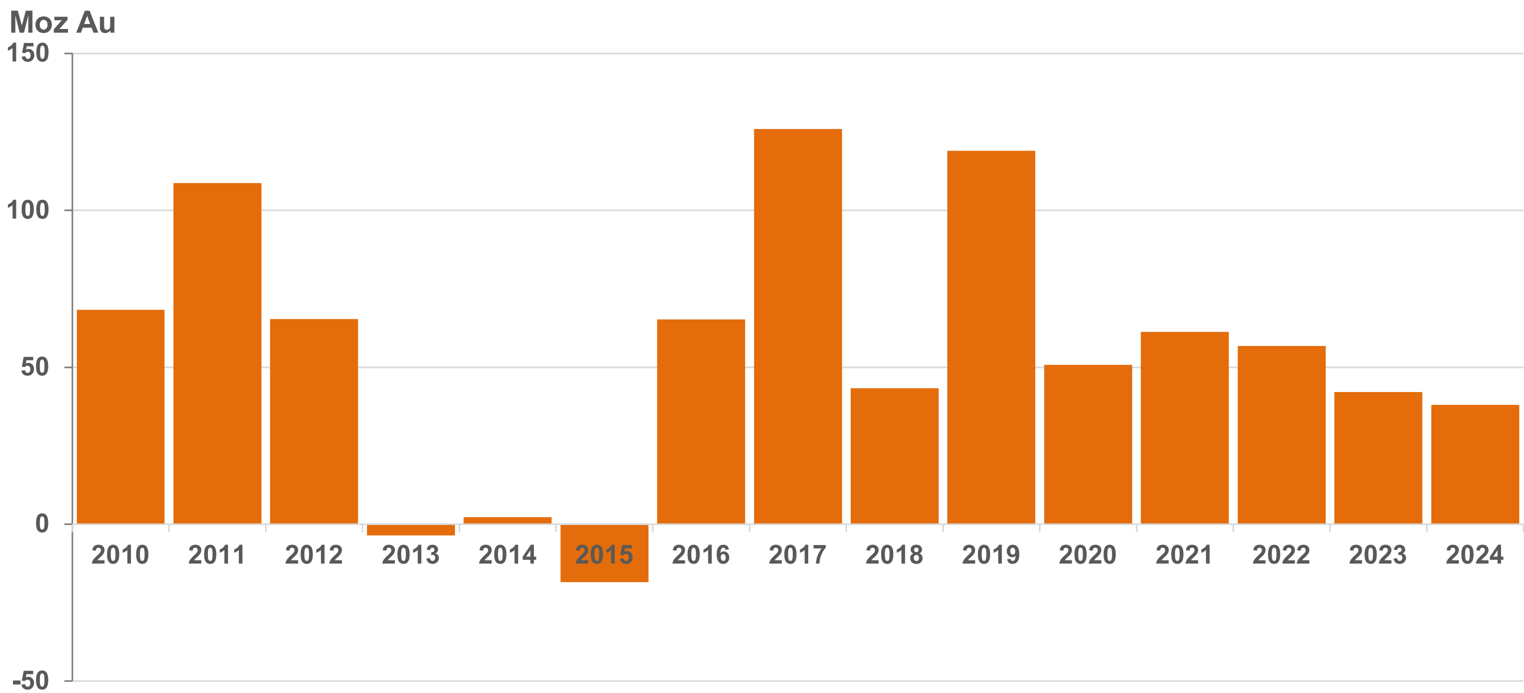
Cumulative Metal for 150 major & giant gold deposits found prior to 2010
Based on published resources in each given year



Note: Based on a sample of Primary gold deposits containing a pre-mined Resource >1 Moz Au and account for 69% of total known resources for all primary gold deposits found prior to 2010

Source: MinEx Consulting © October 2025

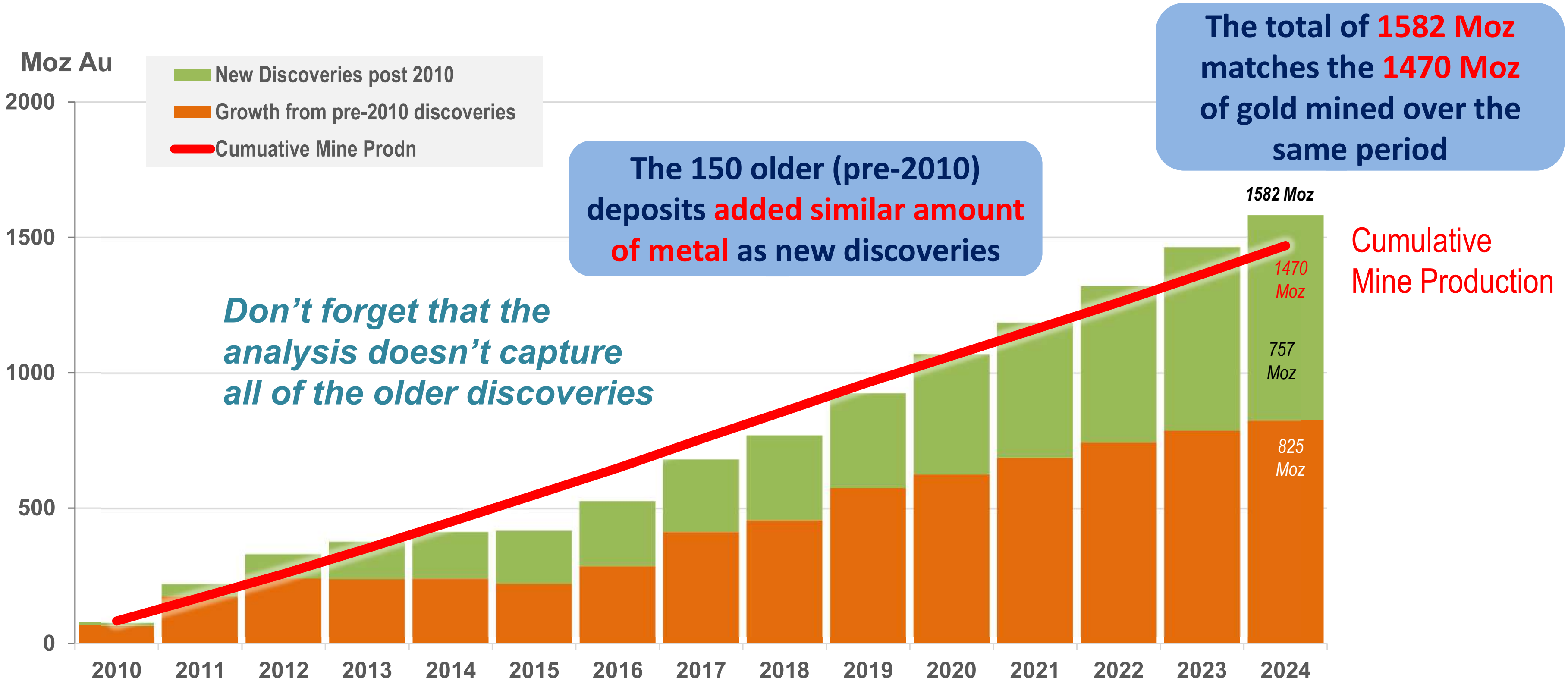
Year-on-year incremental change in the Pre-Mined Resource for 150 major & giant gold deposits found before 2010



Note: The pre-2010 data is based on a sample of 50 Primary copper deposits containing a pre-mined Resource >10 Mt Cu

Source: MinEx Consulting © October 2025

Cumulative increase in Pre-Mined Resource for pre- and post-2010 discoveries
World : Gold : 2010-2023



Note: The pre-2010 data is based on a sample of 150 Primary gold deposits, which represent ~62% containing a pre-mined Resource >1 Moz Au

Source: MinEx Consulting © October 2025

Are we finding enough copper and gold to meet future demand ?

the answer is …..

YES ! When you factor-in resource growth from existing mines and old discoveries, industry is finding enough copper to replace what's being mined. The story for gold is less compelling.

THE PROBLEM IS THAT (EVENTUALLY) THE OLD MINES WILL CLOSE DOWN ….

… AND IT TAKES TIME TO DEVELOP NEW MINES

And not all discoveries get developed

Only 41% of all discoveries in the World since 1950 have been developed. The average delay is 15 years

	Number of Deposits			Contained Metal (Pre-Mined Resource basis)				Average Delay (Years)
	Discovered	Developed	Conversion Rate	Discovered	Developed		Conversion Rate	
Gold	2629	1222	46%	7228	4669	Moz Au	65%	11.8
Copper	1173	424	36%	3223	1763	Mt Cu	55%	18.0
Zinc+Lead	436	218	50%	1103	610	Mt Zn+Pb	55%	14.1
Nickel	477	160	34%	375	194	Mt Ni	52%	18.4
Uranium	375	160	43%	11020	6170	kt U3O8	56%	14.1
Bulk	1227	426	35%	na	na			18.7
Precious	387	204	53%	na	na			13.6
Other	941	284	30%	na	na			16.2
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Total/Average	7645	3098	41%	na	na		~55%	14.7

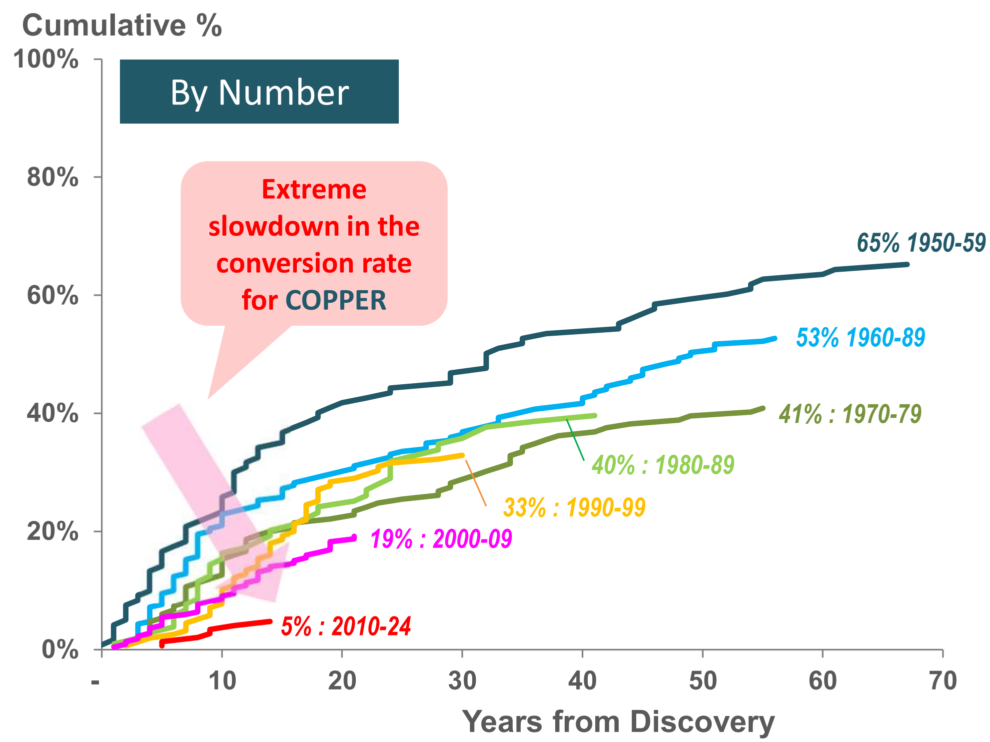
In terms of the amount of metal found, the conversion rates were higher … i.e. bigger deposits are more likely to be developed

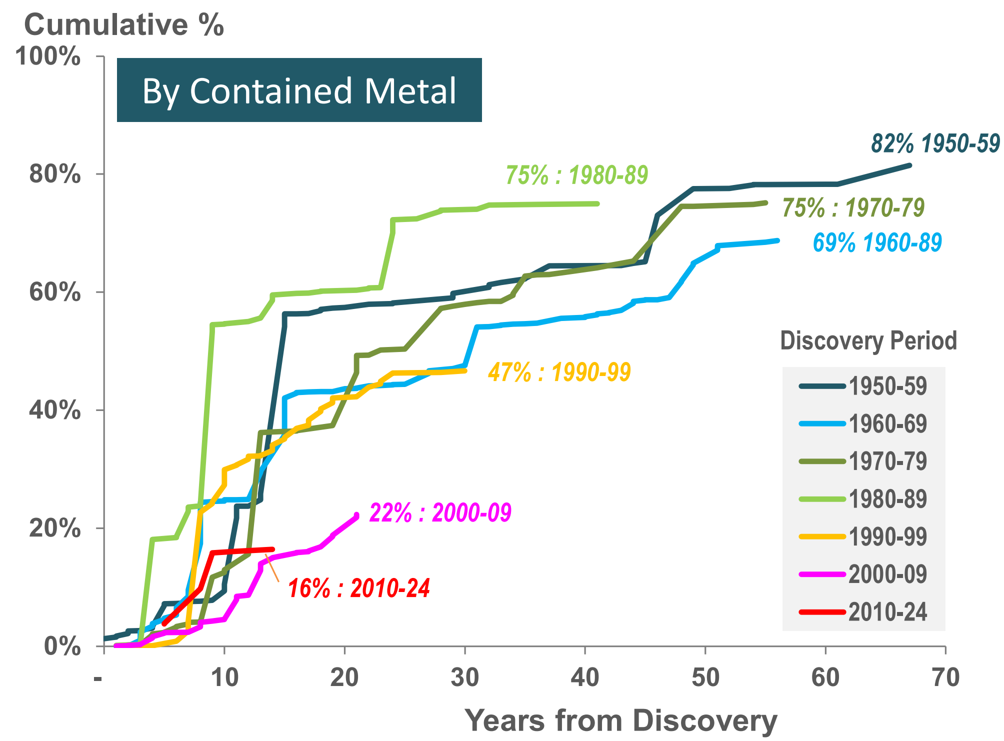
Note: Analysis based on “Significant” sized deposits
Excludes deposits found by artisanal workers
“Precious” includes Diamonds and Other Gemstones, Silver and PGE

Source: MinEx Consulting © September 2025

Cumulative Number & Metal in Discoveries that become mines

All Significant COPPER Discoveries in the World : 1950-2024 : By Decade



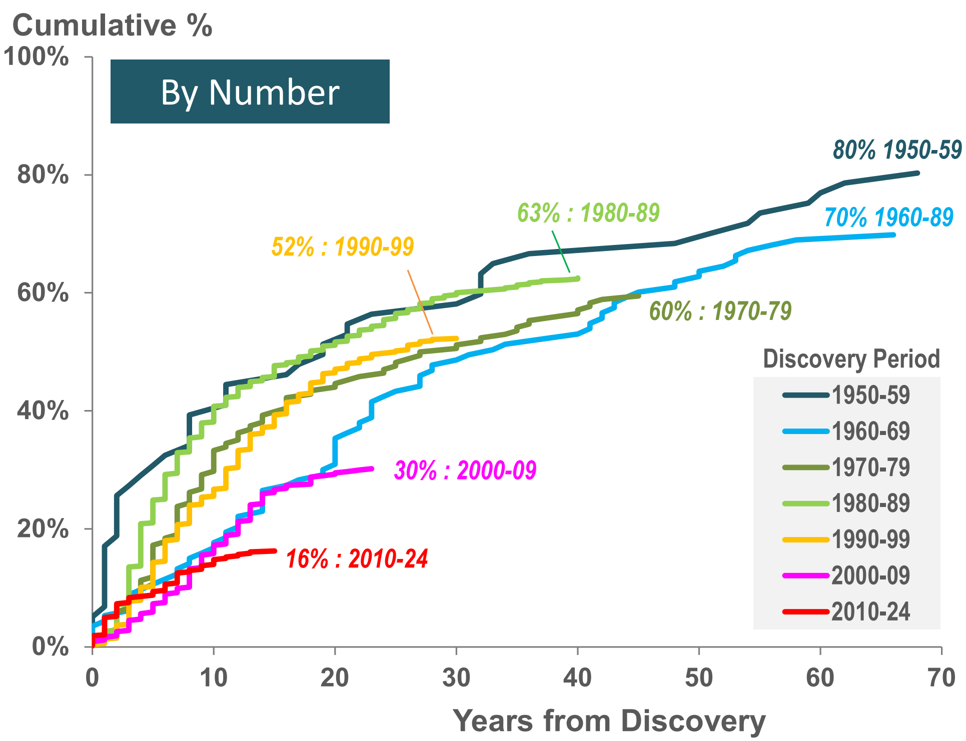


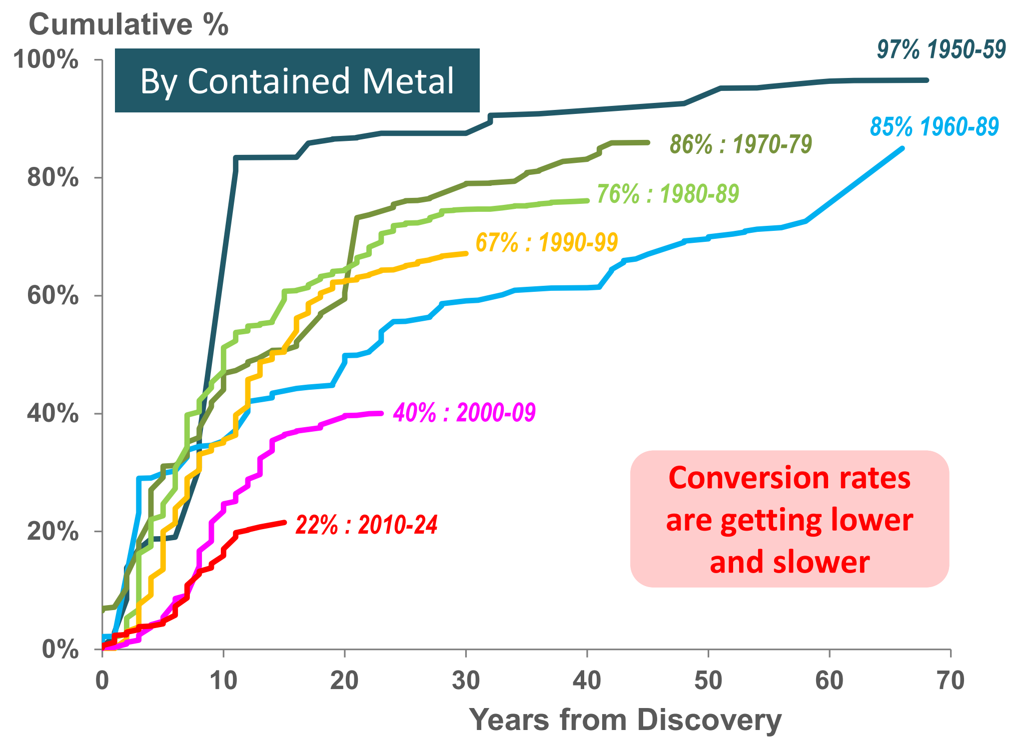
Note: Excludes artisanal discoveries

Source: MinEx Consulting © September 2025

Cumulative Number & Metal in Discoveries that become mines

All Significant GOLD Discoveries in the World : 1950-2024 : By Decade



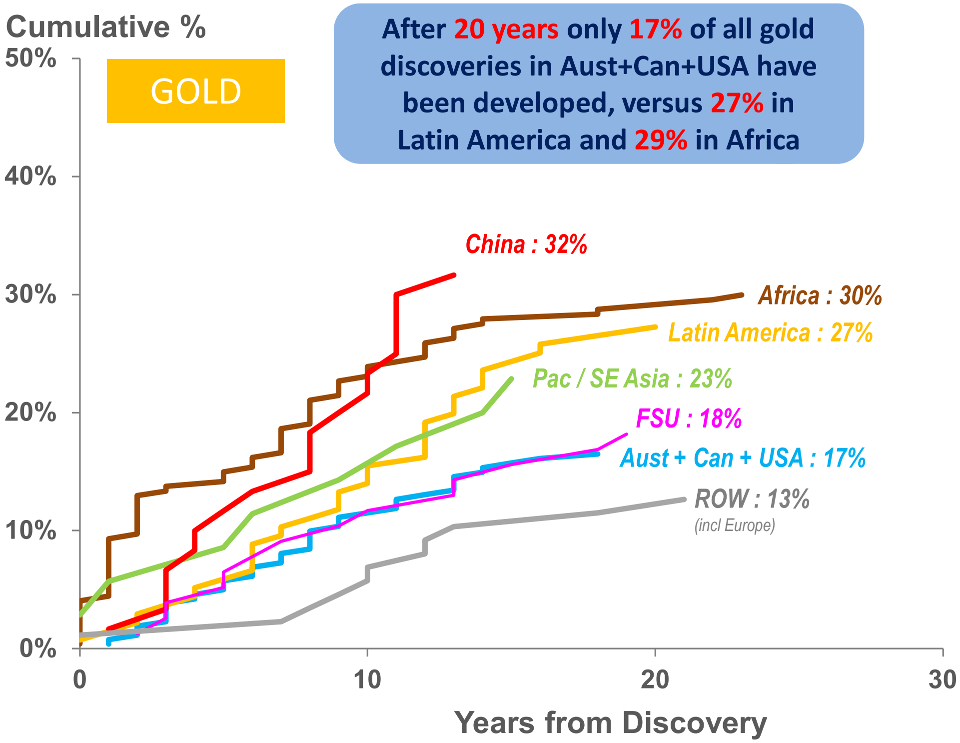


Note: Excludes artisanal discoveries

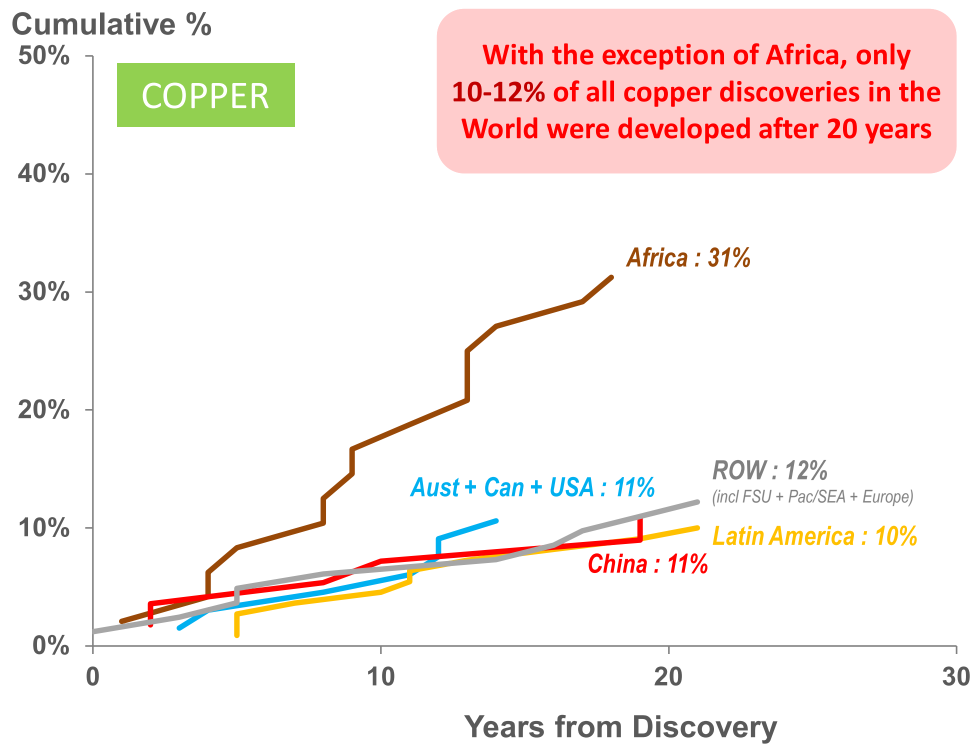
Source: MinEx Consulting © September 2025

Cumulative Number of Discoveries that become mines

All Significant GOLD & COPPER Discoveries in the World : 2000-2024 : By Region



After 20 years only 17% of all gold discoveries in Aust+Can+USA have been developed, versus 27% in Latin America and 29% in Africa



With the exception of Africa, only 10-12% of all copper discoveries in the World were developed after 20 years

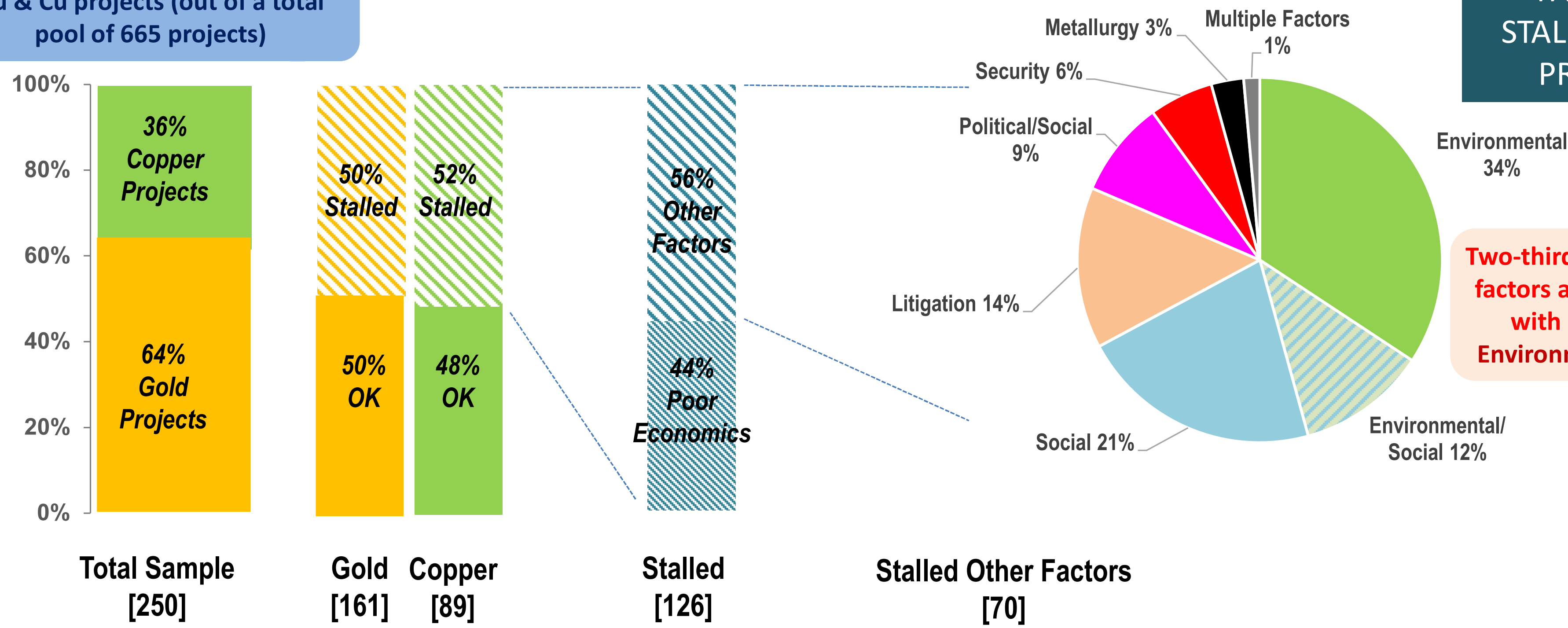
Note: Excludes artisanal discoveries

Source: MinEx Consulting © September 2025

Half of all Projects at PreFeas/Feas are currently stalled

Current status of Copper and Gold Projects at PreFeas/Feasibility Study Stage: World

Assessed the current status of 250 Au & Cu projects (out of a total pool of 665 projects)



FACTORS STALLING THE PROJECT

Two-thirds of the other factors are associated with Social and Environmental issues

Based on Gold and Copper Projects >100 koz Au and > 100 kt Cu

Source: MinEx Consulting © September 2025

Are we finding enough copper and gold to meet future demand ?

the answer is .....

MAYBE NOT ! When you factor-in the difficulties of converting a discovery into a mine, there is a real risk that we won't have enough new capacity to replace the old mines when they close down. This issue will begin to bite in a decade's time.

Summary / Conclusions

Are we finding enough Cu & Au to meet our future needs ?

- Forecast demand for primary copper is expected to double by 2050.
- The number of new copper discoveries has dramatically dropped in recent years. Since 2010 ….
  - Only 207 Mt of copper (in 54 deposits) was found versus 272 Mt Cu mined
  - 1967 Moz of gold (in 645 deposits) was found versus 1470 Moz Au mined

NO

- When you add-in resource growth at existing mines & old discoveries the situation is less dire. Since 2010 …
  - 813 Mt of copper and 1582 Moz of gold was added to the global resource base

YES

- However its becoming progressively harder and longer to convert a discovery into a mine.
  - Presently, less than 15% of all copper deposits and 30% of gold discoveries are developed within 20 years of discovery. Key issues are poor project economics and ESG challenges

MAYBE NOT !

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