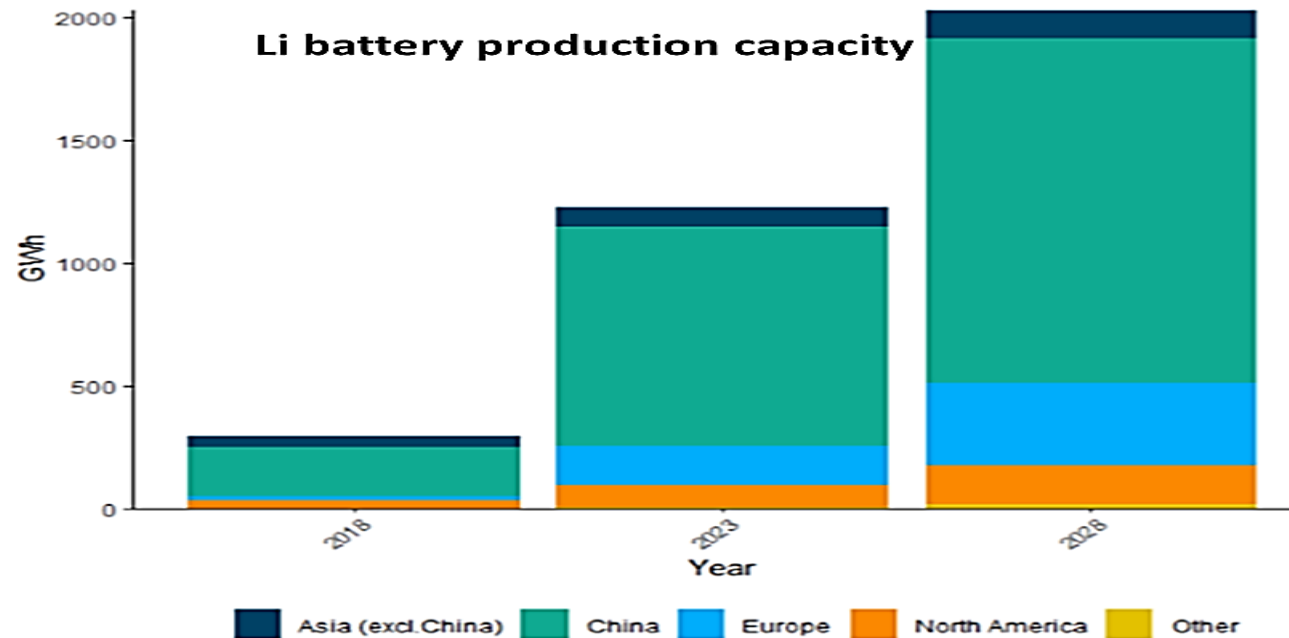


Making Minerals Great Again

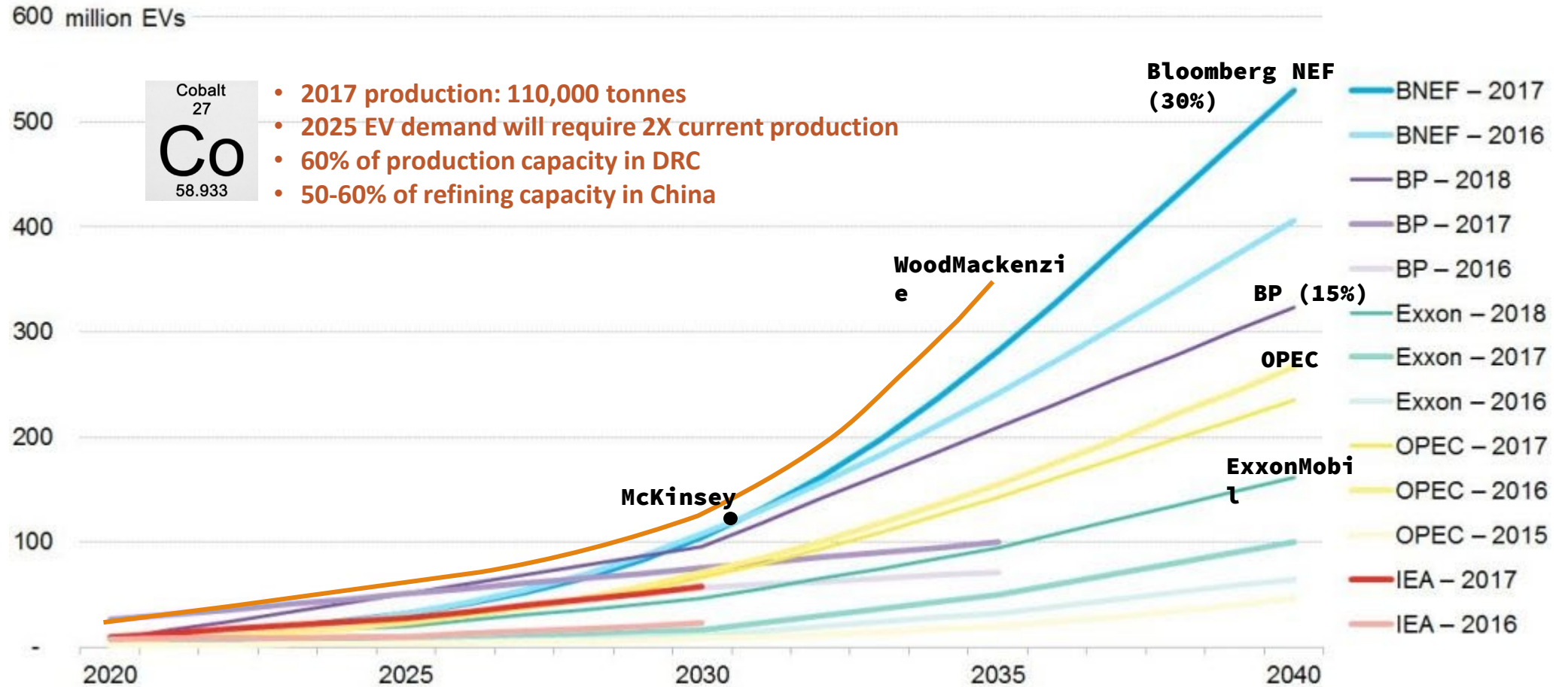
Critical energy minerals

Critical (energy) minerals are mineral resources that are essential to the “energy transition” and whose supply may be disrupted.



- “If you can’t grow it, you gotta mine it.”
- Minerals have always been critical to energy
- Cu: ~5 million tons of rock are mined / day; volumetrically equivalent to the excavation of 5 Panama Canals / year
- Exponential growth for the last century

Electric vehicles; projections to 2040



Source: International Energy Agency

modified from Bloomberg (2018)

Every resource problem is multidisciplinary

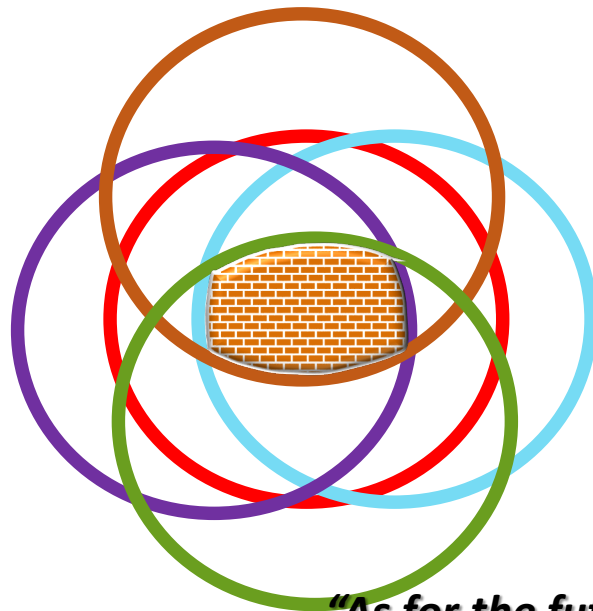
Solving three simultaneous equations:

$f(x_1)$ = sound science and technology

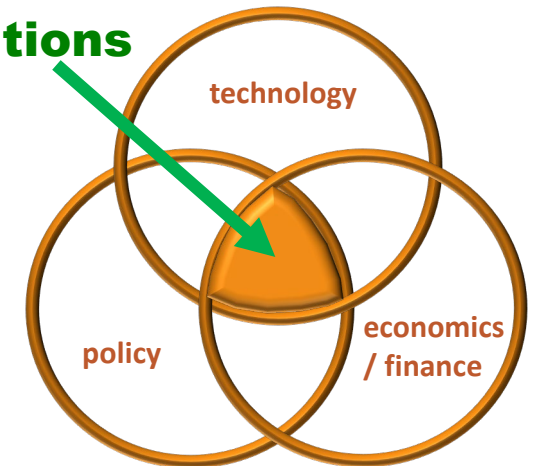
$f(x_2)$ = consistency with policy which adequately addresses the welfare of society

$f(x_3)$ = financial viability to attract the interest of investors

= complexity (trade-offs occur in multiple dimensions)



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"As for the future, your task is not to foresee, but to enable it." - Antoine de St. Exupery

multidisciplinary studies for interdisciplinary solutions

Our speakers

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