Hal Quinn
President & CEO
National Mining Association

Capitalizing on US Mineral Potential

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President & Chief Executive Officer
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Global Megatrends

Hyper-Urbanization

Half the population resides in urban centers today — 75% by 2050

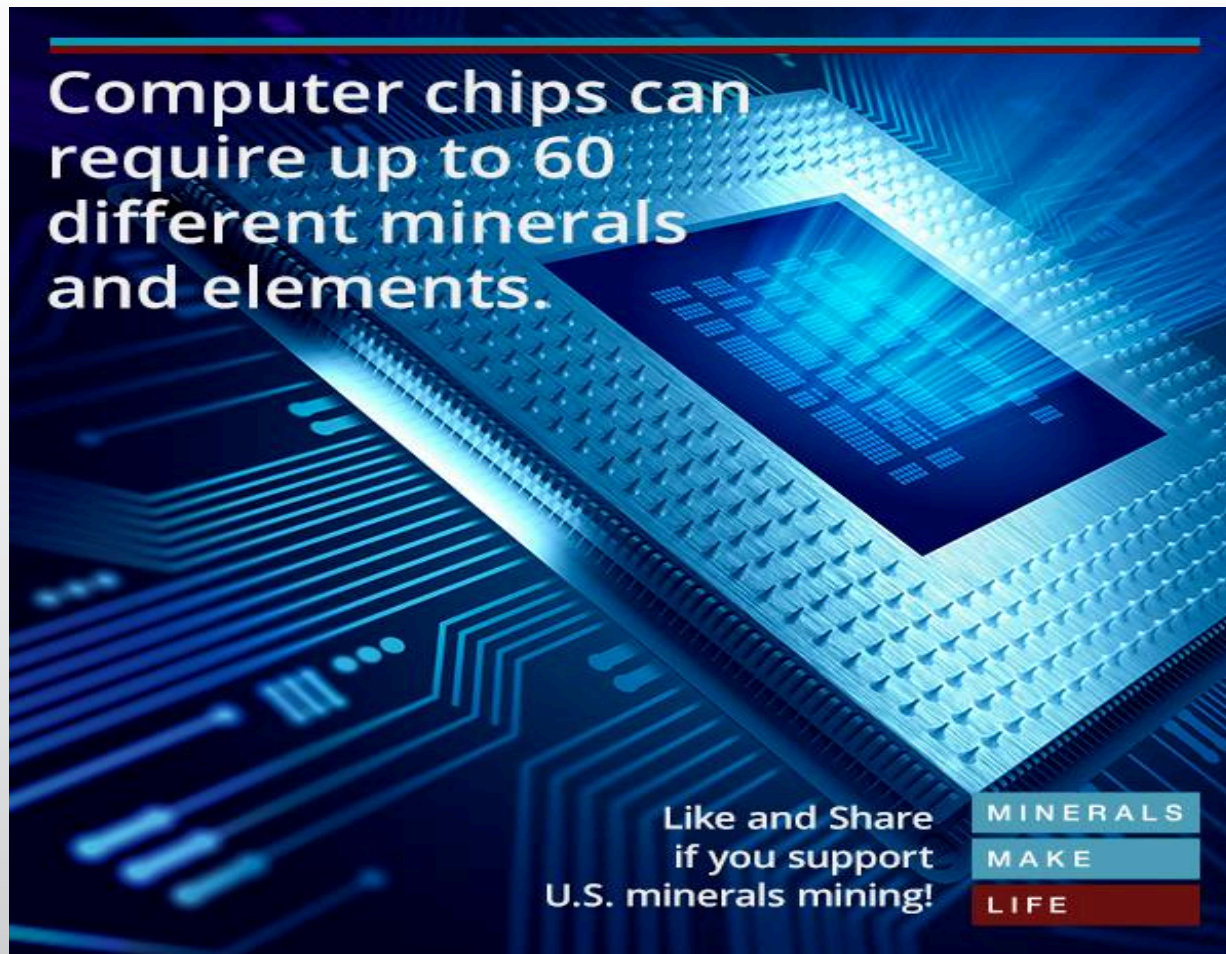**Explosion in 'world middle class'**

Rising middle class in developing world is shifting global consumption and supply patterns

Technology

2.5 billion connected people and 1 trillion connected objects
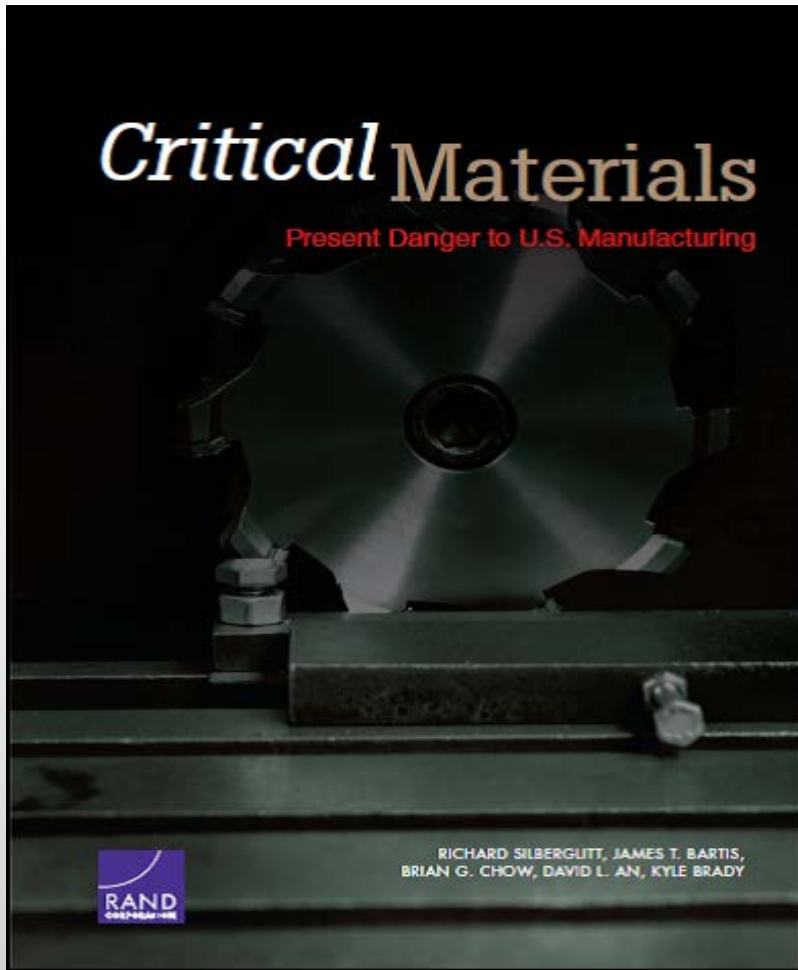
NMA.

Modern Society Depends on Minerals
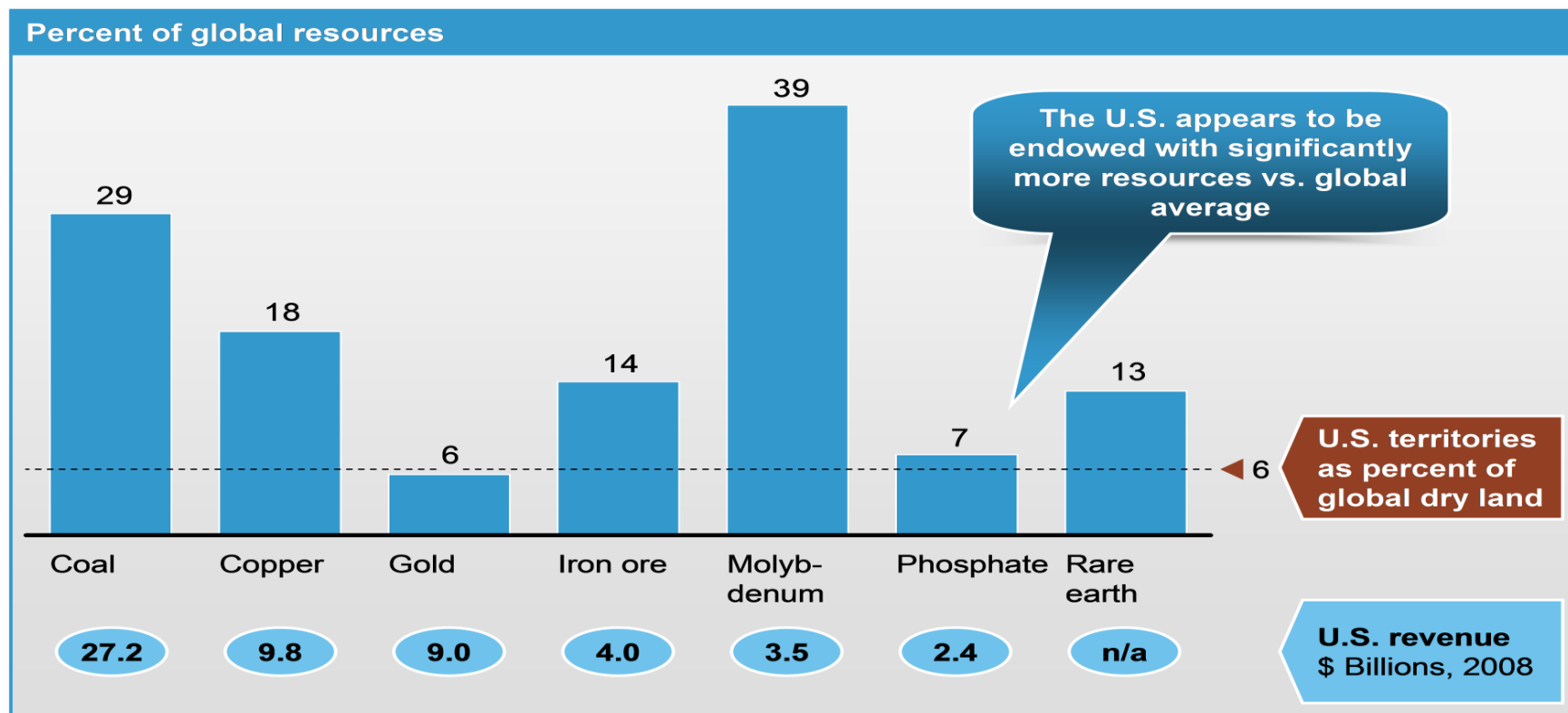
Substitutes: Few and Inferior

- Yale University: ***Materials Basis of Modern Society*** (2013)

  - Substitution Potential for 62 metals

  - None for 12

  - For all 62 the substitutes significantly inferior for some applications

World Class Resource Base

EXHIBIT 2

U.S. mining enjoys an enviable resource base compared to most other countries

Percent of global resources

The U.S. appears to be endowed with significantly more resources vs. global average

U.S. territories as percent of global dry land — 6

	Coal	Copper	Gold	Iron ore	Molyb-denum	Phosphate	Rare earth
Percent	29	18	6	14	39	7	13
U.S. revenue $ Billions, 2008	27.2	9.8	9.0	4.0	3.5	2.4	n/a

1 Reserves figures used

SOURCE: USGS; McKinsey Basic Materials Institute; Fraser report 2010

NMA.

U.S. Permitting: Ranked Last Globally

Hoover Dam took 91.8 billion cubic feet of concrete to construct from 1930 to 1935.

It takes twice as long just to get a mining permit today.

MINERALS MAKE LIFE

Efficient Permitting Shouldn't Take A Miracle

If you applied for a minerals mining permit the day Michelangelo started painting the Sistine Chapel...

...he'd have been done painting for 6 years when you finally got it.

MINERALS
MAKE
LIFE

21st Century Permitting

- Leading practices to produce timely and better outcomes:

  - **Consolidate and coordinate agencies' responsibilities for reviews**

  - **Fix beginning and ending timelines for key decision points**

  - **Recognize state environmental assessments as a substitute or equivalent for federal assessments**

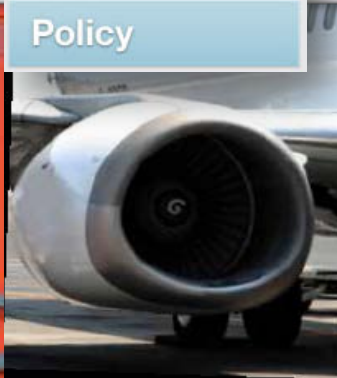 www.mineralsmakelife.org

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