



W BOLIDEN

Press trip Garpenberg June 8-9, 2015

Lennart Evrell

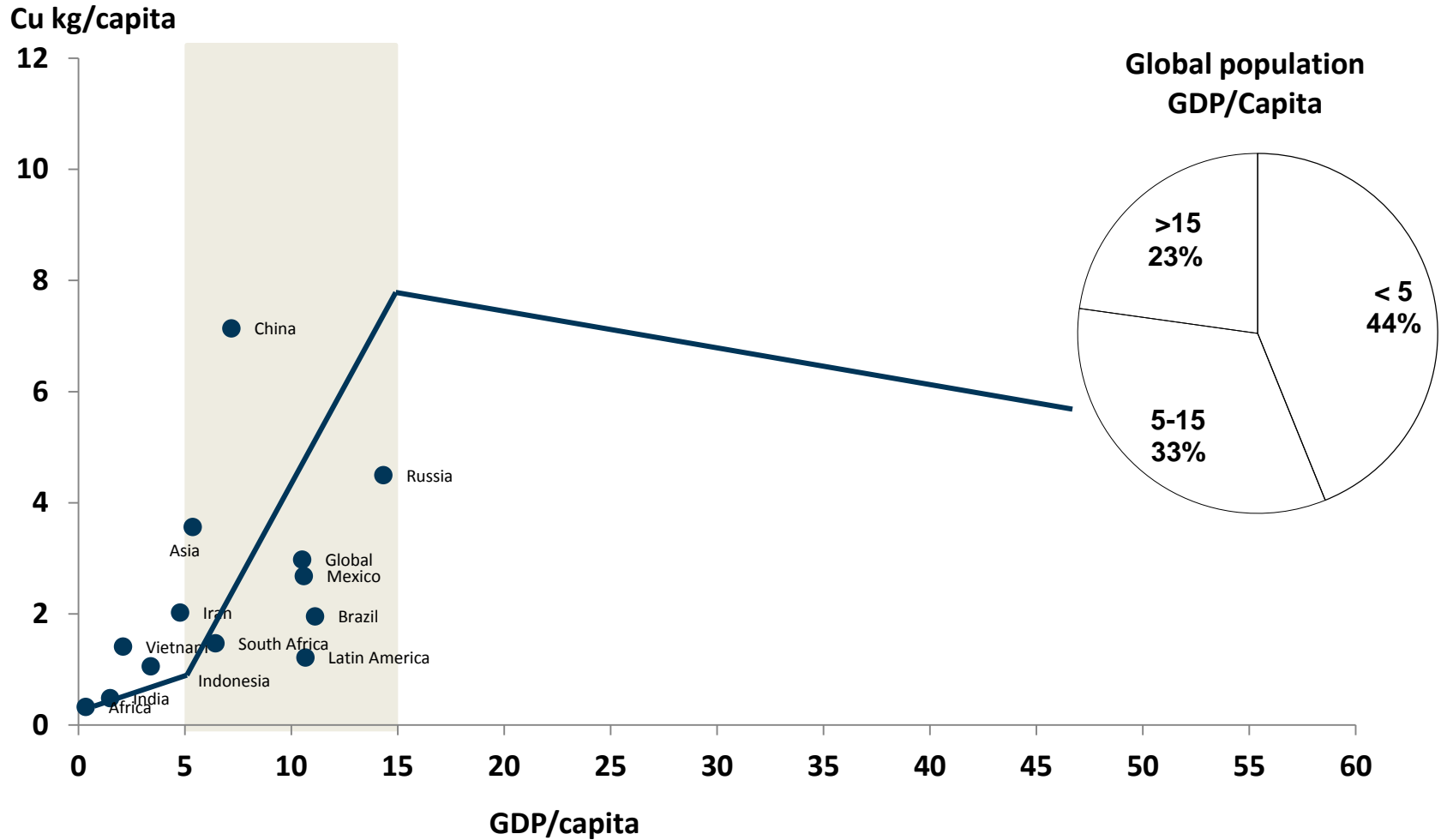
President and CEO Boliden Group

Metals for the developing world



2000 November 27: **Credit:** C. Mayhew & R. Simmon (NASA/GSFC), NOAA/ NGDC, DMSP Digital Archive

The developing world drives demand growth



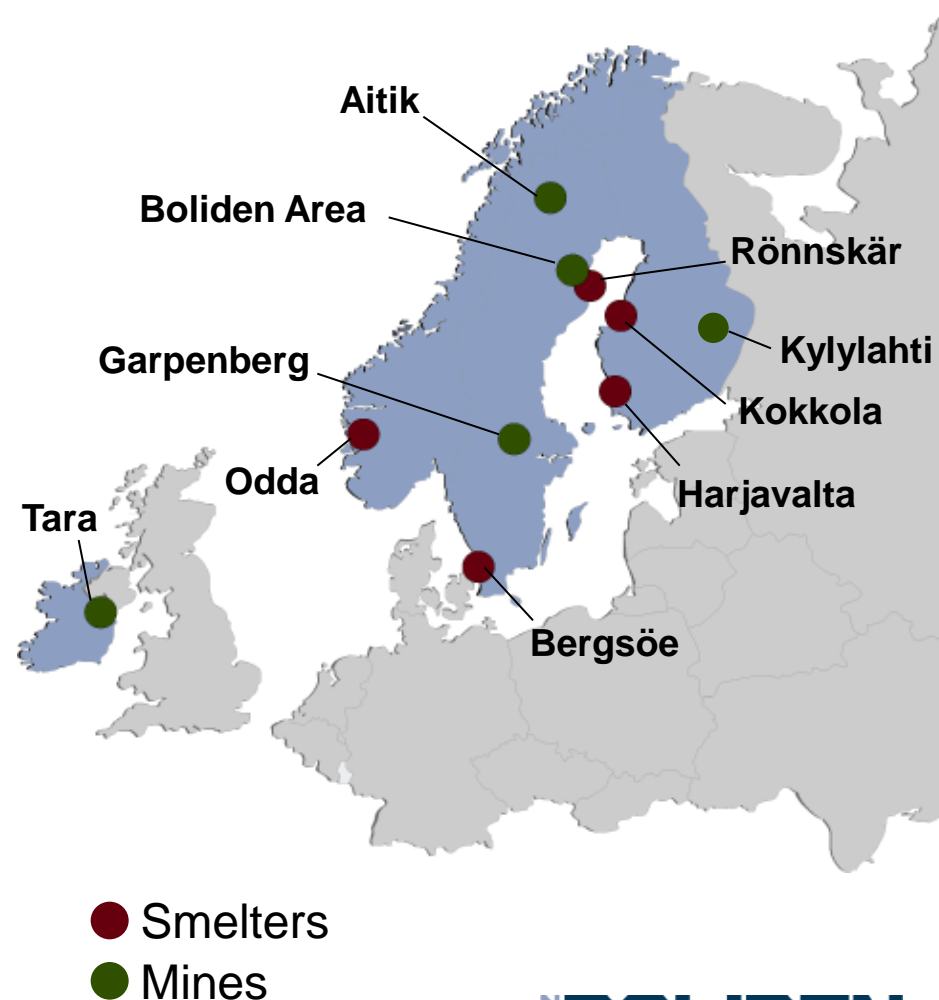
Source: IMF, Wood Mackenzie, Reuters Datastream, Boliden calculations

”Urban mining” for the developed world

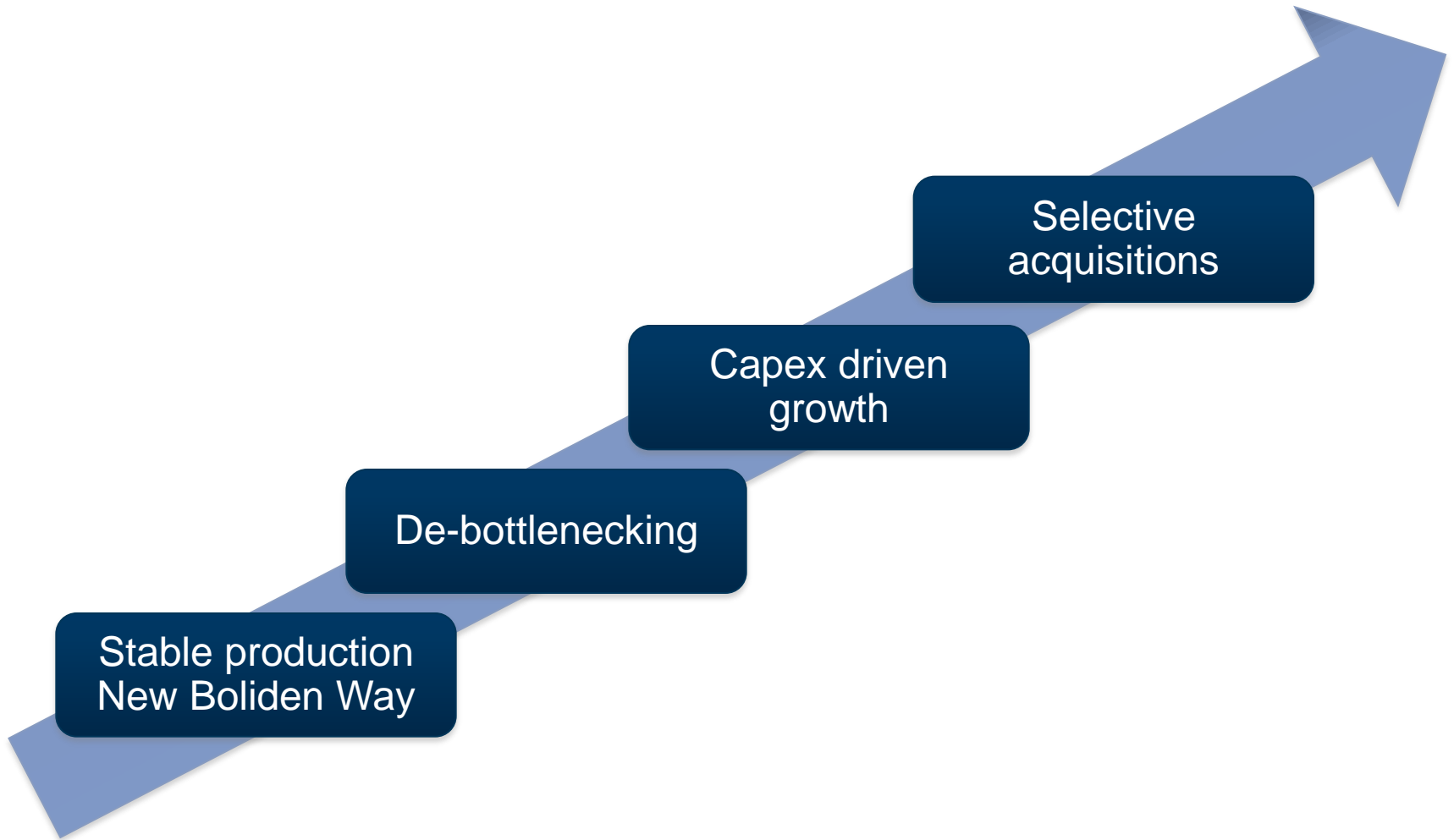


Well positioned for the current market

- 5 mine areas with 9 mines
- 5 smelters
- Zinc
- Copper
- Gold, silver, lead
- High environmental standards
- Low risk environment
- Sales 40 BSEK
- EBIT 2.6 BSEK
- 5,000 employees



Consistent strategy



Metals production from own mines and complex materials

- **Clean concentrates scarce**
 - High quality mines depleting
 - Competition based on cost-efficiency
- **Complex raw materials abundant**
 - New mines with complex concentrates
 - Secondary materials
 - Legislation
 - Competition based on technical competence



Strong technology know-how

- Concentrator technology
- Mine design
- Water and tailings management
- Mobile control systems
- Flash smelting
- Direct leaching
- Electronic recycling



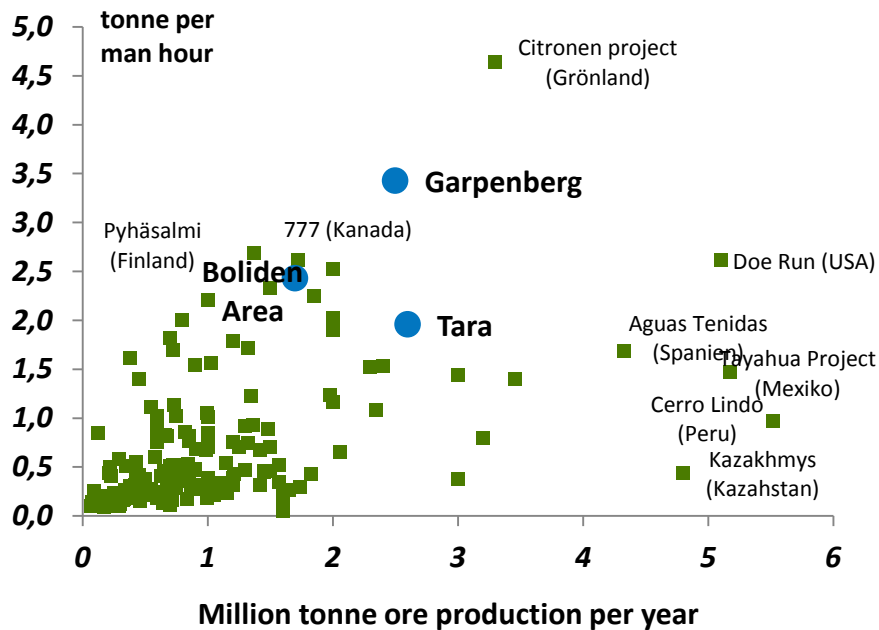
In-house project management

- General design
- Project management all disciplines
- No large turn-key contracts
- Standardized process - continuous improvements from previous projects

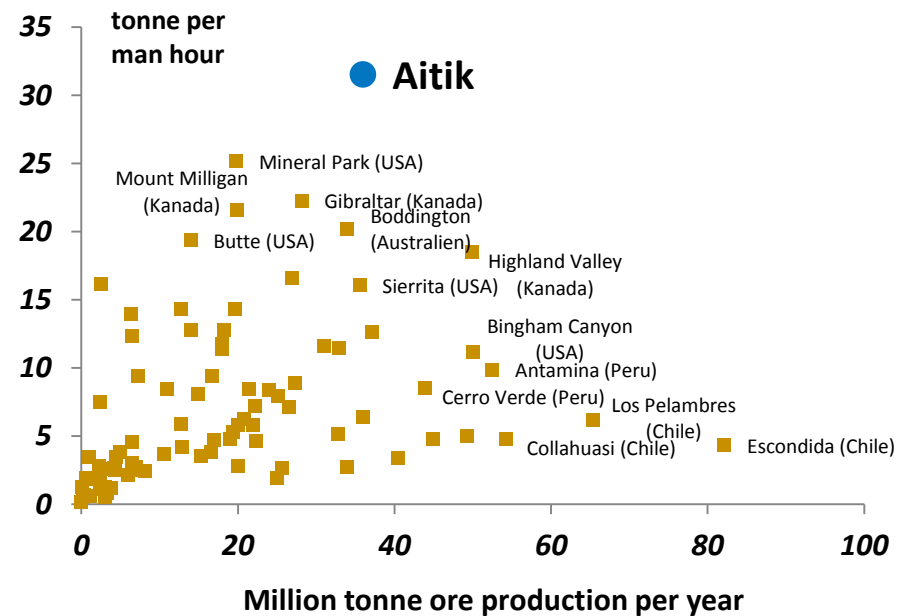


High productivity

Zinc - underground mines 2016



Copper - open pit with mill 2014



Source: Wood Mackenzie

Aitik – no 1 productivity

Open pit Cu mines		Percentile **
Head grade	% Cu	99
<i>Mine</i>	<i>t ore/hour</i>	<i>1</i>
<i>Mill</i>	<i>t ore/hour</i>	<i>0</i>
<i>G&A</i>	<i>t ore/hour</i>	<i>0</i>
<i>Overall</i>	<i>t ore/hour</i>	<i>0</i>
Wage rate	\$/hour	87
Labour cost	\$/t	12
Cash cost, Normal C1* - <u>All</u> mines	c/lb Cu	42

* Cash cost Normal C1, Wood Mackenzie Q3 2014 estimate for 2014

** All mines in Woodmackenzie model, Q2 2014 estimates for 2014

Garpenberg built on Aitik experience

- From 1.4 to 2.5 mt of ore/year
- Production start May 2014
- New industrial area
- New underground facilities
- Capex SEK 3.9 billion
- Boliden's 2nd largest investment



Note: Reserves and resources: 2013-12-31 (2012-12-31). Resources excl. mineral reserves.

New technology for reducing emissions of thiosalts and organic material



Delivering on time and on budget

	On time	On budget	Capex, BSEK
Aitik 36 – highest productivity in the world	√		~6.2
Rönnskär – world's leading e-material facility	√	√	~1.3
Kankberg – gold mine (no 1 tellurium mine)	√	√	~1.0
Garpenberg – highest productivity in the world	√	√	~3.9

The Nordic Mining Cluster



Power and productivity
for a better world™



Ramping up copper mine Aitik to 45 Mton/year

- 45 (38) Mton annually, 2017
 - Life of mine 2040 (2030)
 - Reserve grade 0.22 (0.24)
- Capex 600 MSEK - a first step



Zinc expansion in Odda

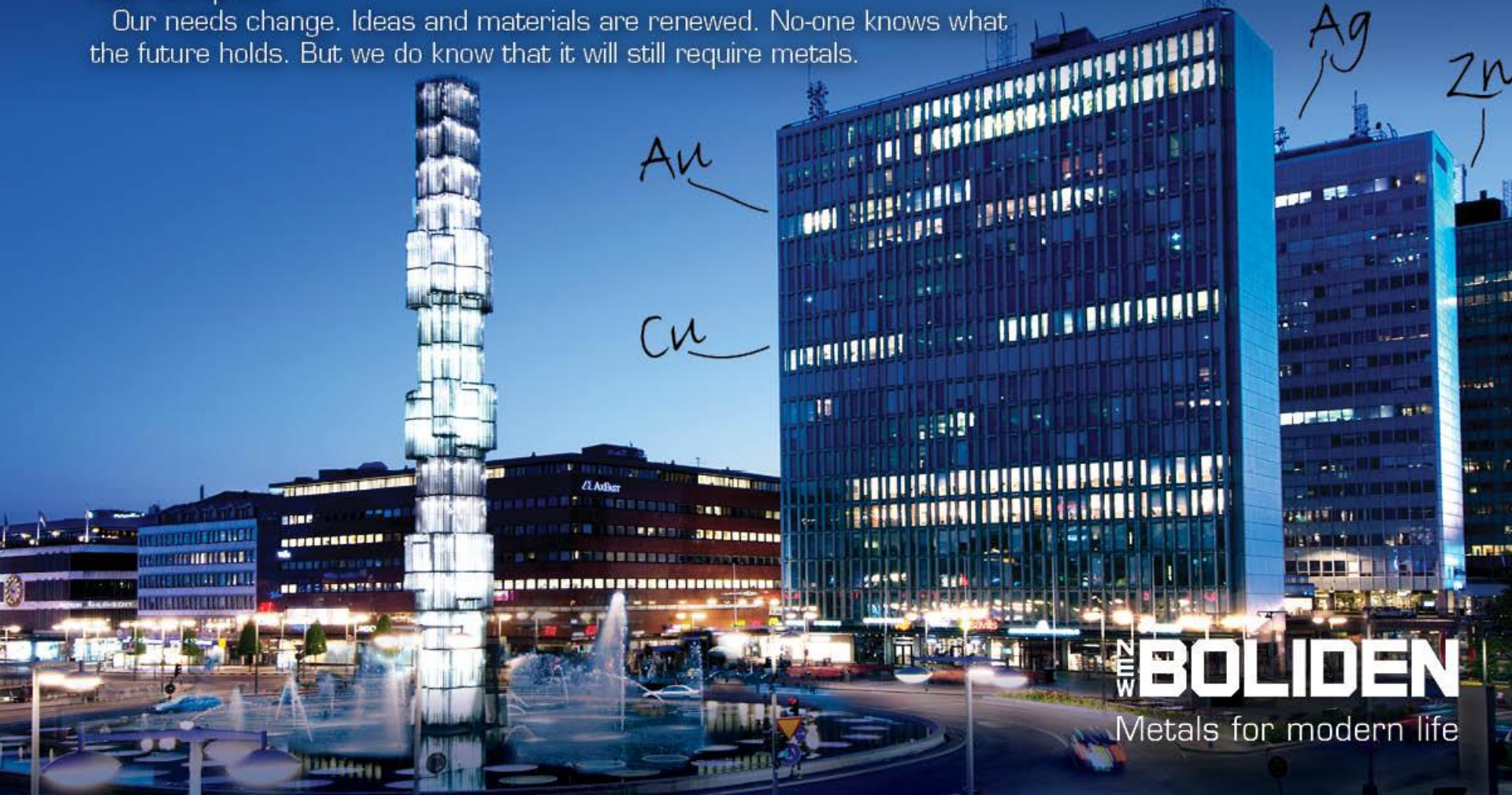
- Expansion to 200 kton zinc/year
- Capex 350 MNOK
 - Revamping and modernization of old cellhouse
 - New Direct Leach reactors
 - Revamping of leaching and purification
- De-bottlenecking investments
- New capacity Q2 2017



We are building the future – over and over again

Stockholm's Hötorget skyscrapers in glass and metal reflect the 1950s' take on the future. Office workers were destined to sit and work here on newfangled electric typewriters, dispatching post to each other through an elaborate pneumatic tube system. That, too, was IT. Then. Now the new generation has taken over those skyscrapers, taking for granted their tablet computers, smartphones and the world as their workplace.

Our needs change. Ideas and materials are renewed. No-one knows what the future holds. But we do know that it will still require metals.



NW BOLIDEN
Metals for modern life