

CRM-A Webinar:


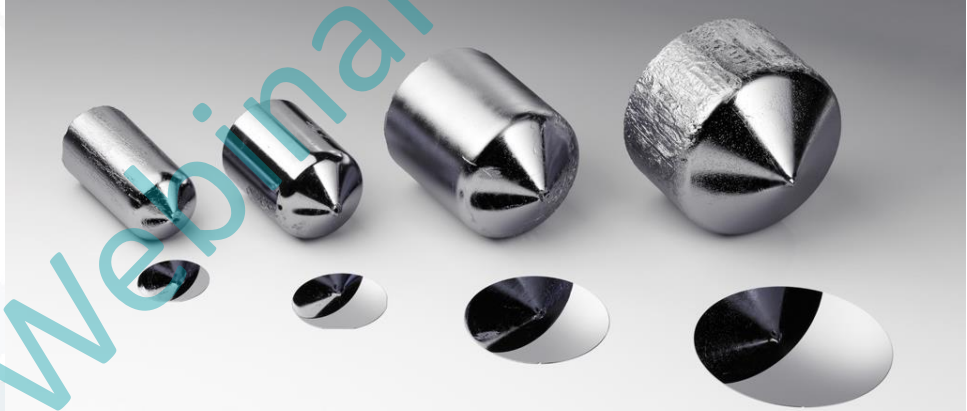
The Critical Raw Materials Act: an opportunity to solve the EU's supply chain issues?

**Freiberger Compound Materials GmbH**

November 29, 2022

CRM-A Webinar

# FCM product portfolio

LEC Liquid Encapsulated Czochralski				VGF Vertical Gradient Freeze			
							
Semi-insulating		Semi-conducting		Semi-insulating		Semi-conducting	
C		Te		C		Si	Zn
3"	4"	6"	3" 4"	3" 4" 6" 8"	3" 4" 6" 8"	4" 6"	

FCM Core Products  
 Rising Stars

# GaAs enables future technologies

Wireless Devices

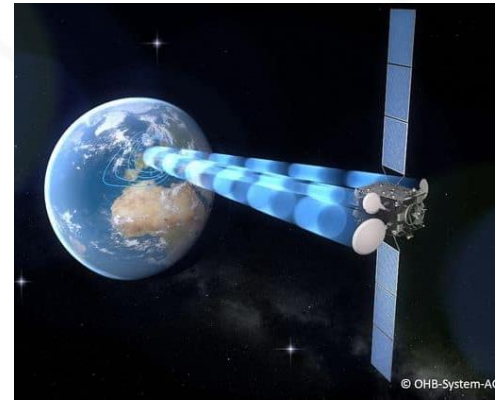
Smartphone PA



WiFi

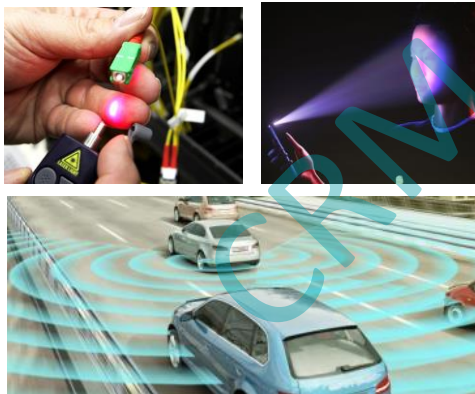


Defense and Space



Opto-Electronics

LASER



μLED Displays



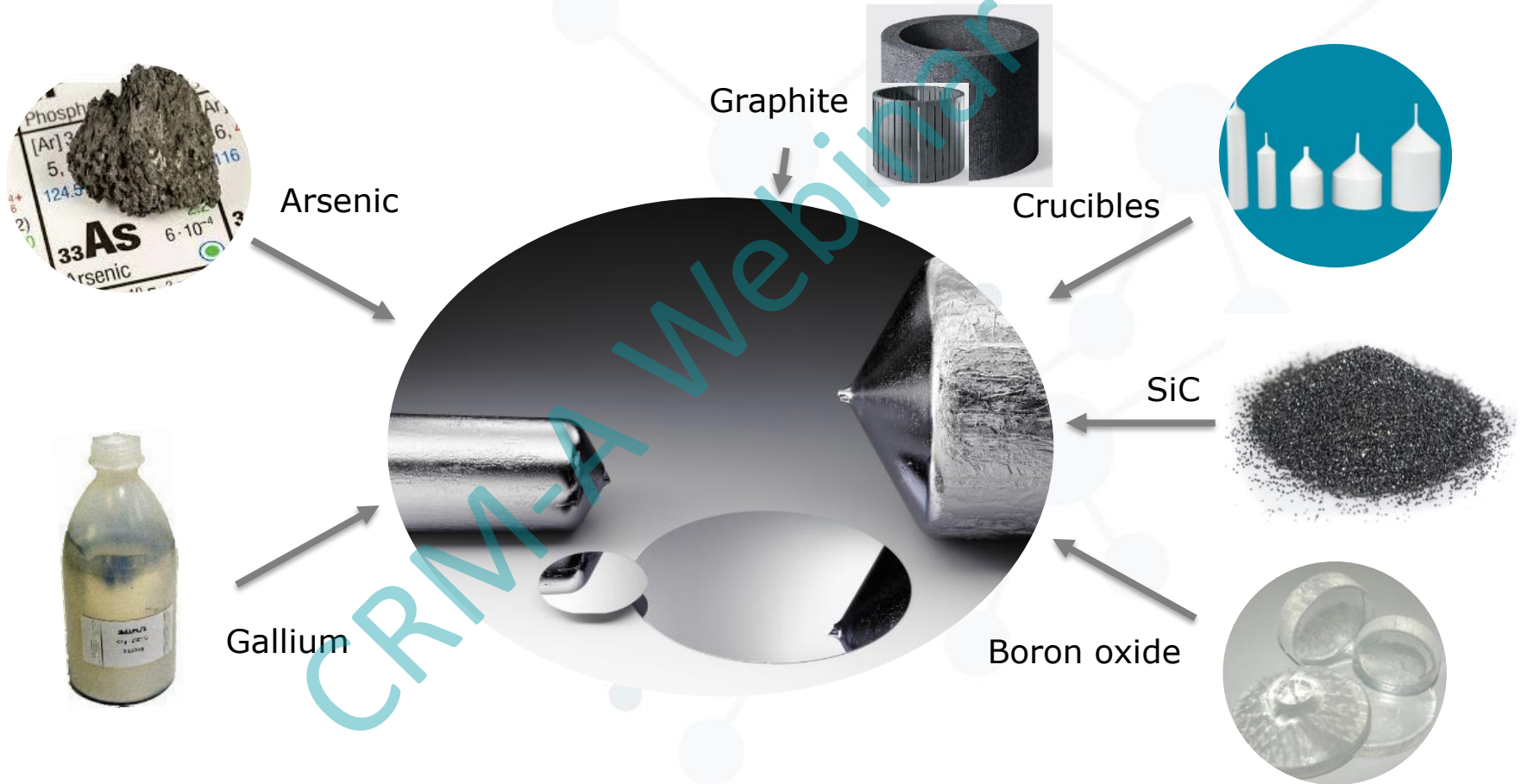
LED



# Critical supply of GaAs-production

Raw Materials

Crucial Auxiliary Materials



# Raw material supply – resilience?

Raw materials

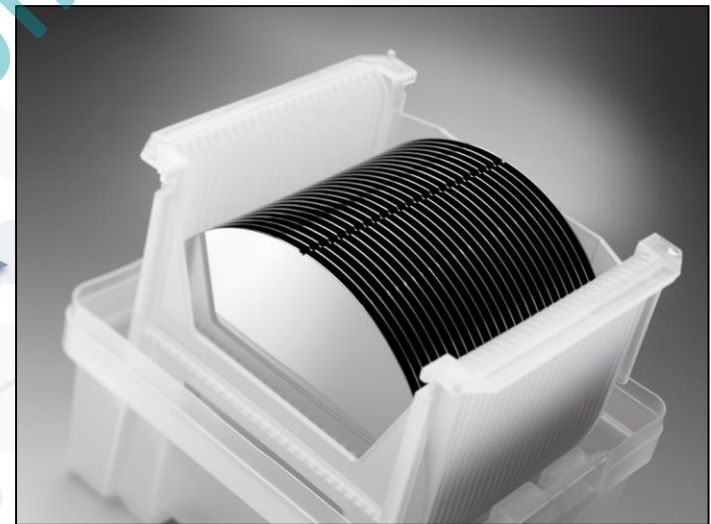
GaAs crystals

GaAs Substrates

Sawing

Polishing

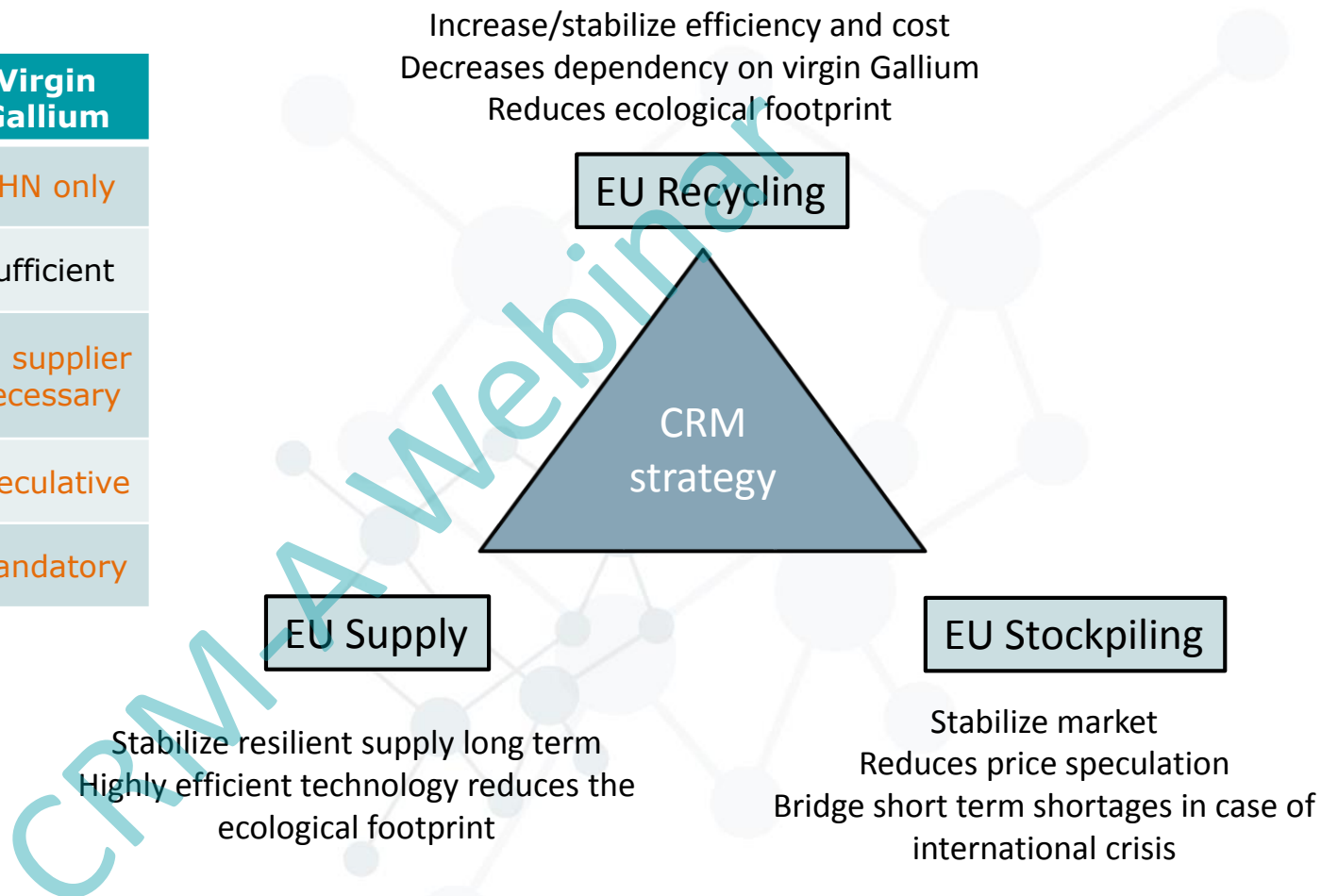
Cleaning



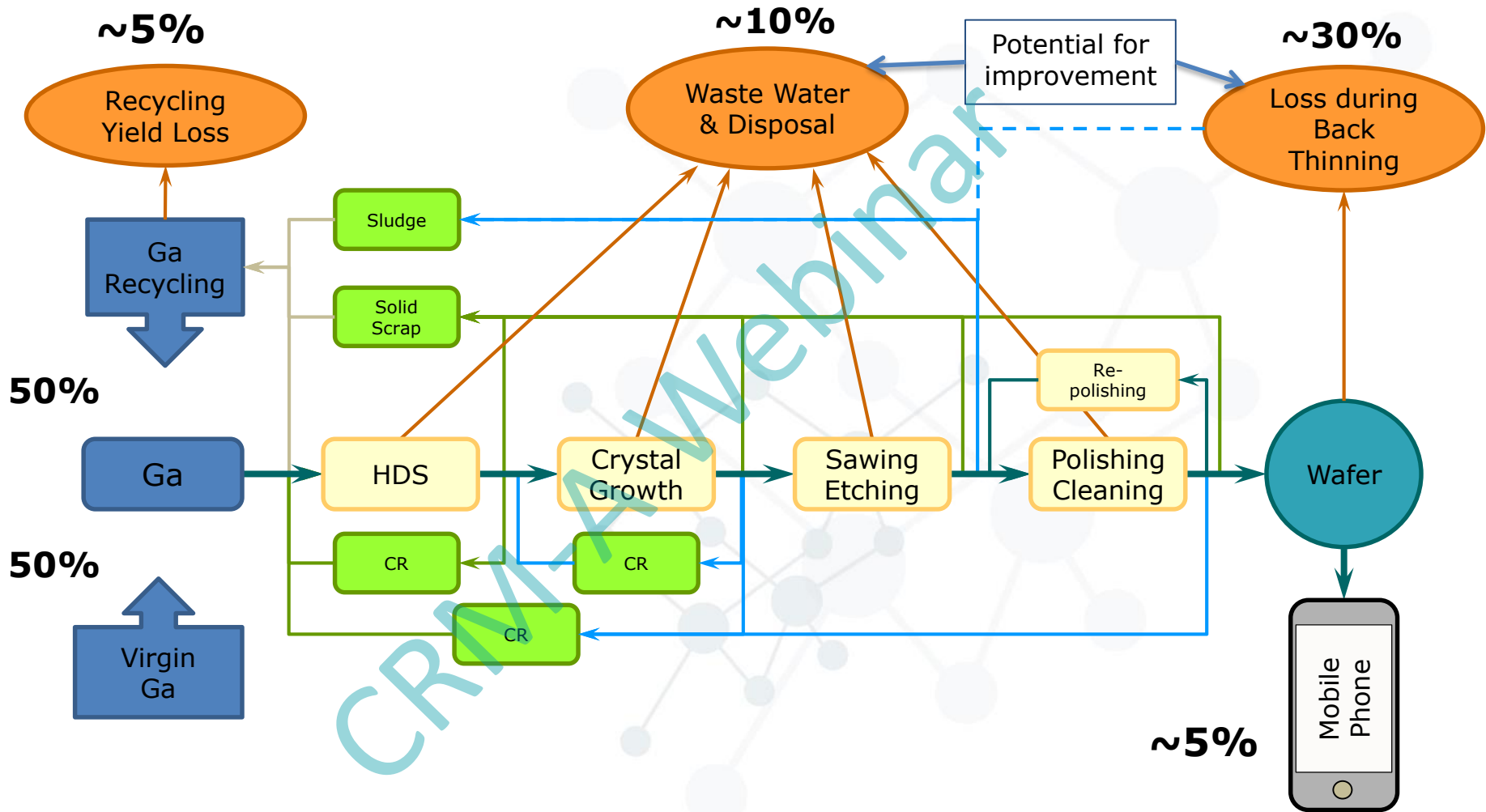
Gallium supply from China only  
German activity has been closed 2015

# CRM Gallium – 3 corner strategy

Status	Virgin Gallium
Sources	CHN only
WW capacity	sufficient
Cap. expansion (time, money)	EU supplier necessary
Pricing	speculative
Recycling	mandatory



# Gallium value chain - recycling



# Virgin Gallium production

Gallium is a by-product from Aluminum value chain.

