

ZEDEC ALLIANCE CONFIDENTIAL

# METAL FORT

THE BACKBONE - Specialty Metals Partnership

## Executive Summary

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**Metal Fort** is invited to serve as the specialty metals supplier for the Pangea Alliance, providing Niobium, Germanium, and other critical metals that form the backbone of GlyphMap's advanced circuitry.

**Your Role:** You are THE BACKBONE. Your metals provide the superconducting traces, the IR-transparent processing cores, and the magnetic field generation. These are not commodities—they are the skeleton of a healing artifact.

## Why Metal Fort

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- **Specialty Metal Expertise:** Access to rare and exotic metals
- **India Manufacturing Base:** Cost-effective processing
- **Alloy Capability:** Custom alloy formulation potential
- **Scalable Supply:** Network of refiners and processors

## Material Requirements

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## Primary Metals

Metal	Specification	Use in Device
<b>Niobium (Nb)</b>	99.9% purity, wire/foil form	Superconducting traces (Z-axis)
<b>Germanium (Ge)</b>	99.999% purity, wafer form	IR-transparent processor core
<b>Neodymium (Nd)</b>	Nano-powder, 50-100nm	Magnetic field generation
<b>Beryllium-Copper</b>	C17200 alloy	Golden Jack audio connector
<b>Bismuth-Antimony</b>	$\text{Bi}_2\text{Te}_3$ thermoelectric	Cryo-cooling system

## Why These Metals Matter

**Niobium:** Superconducting below 9.3K. Enables lossless signal transmission in Medical Mode.

**Germanium:** 2.8× electron mobility vs silicon. IR transparent for healing light passthrough.

**Neodymium:** World's strongest permanent magnets. Enables compact scalar field generation.

## Volume Projections

Year	Devices	Niobium (kg)	Germanium (kg)	Neodymium (kg)	Total Value
Year 1	5,000	25	10	50	\$425,000
Year 2	25,000	125	50	250	\$2,125,000
Year 3	100,000	500	200	1,000	\$8,500,000
Year 4	250,000	1,250	500	2,500	\$21,250,000
Year 5	500,000	2,500	1,000	5,000	\$42,500,000

## Financial Terms

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### Premium Pricing Structure

Metal	Commodity Price	Alliance Price	Premium
Niobium	\$40/kg	\$200/kg	5×
Germanium	\$1,500/kg	\$5,000/kg	3.3×
Neodymium (nano)	\$100/kg	\$500/kg	5×

Be-Cu alloy	\$30/kg	\$100/kg	3.3×
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## 5-Year Revenue Projection

Total Metals Value	<b>\$74,800,000</b>
vs. Commodity Sale	~\$20,000,000
Alliance Premium Gain	<b>\$54,800,000 additional</b>

## Quality Requirements

Requirement	Specification
Purity Certification	ICP-MS analysis per batch
Form Factor	As specified (wire, wafer, powder)
Packaging	Inert atmosphere for reactive metals
Documentation	Full COA with lot traceability
Lead Time	6 weeks from order

## Next Steps

- Capability Assessment:** Confirm access to all required metals
- Sample Procurement:** Small quantity samples for testing
- Supply Agreement:** Long-term offtake contract negotiation
- First Order:** Year 1 material procurement

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**ZEDEC** | Michael Laurence Curzi, Prime Principality

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*"Your metals are the backbone of the artifact."*