



# We grow PROUD for ~~you~~. all of us.

SWISS LAB-GROWN DIAMOND



A DEEPTECH AND  
PURPOSE-DRIVEN COMPANY



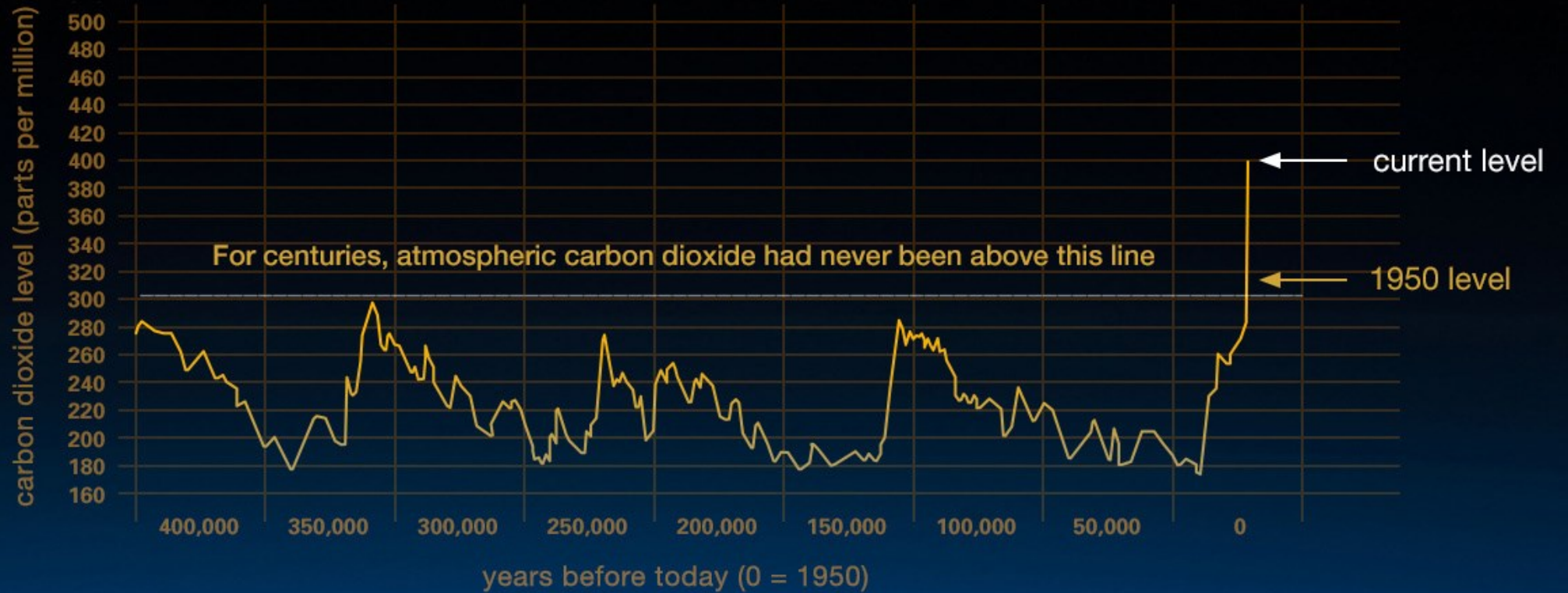
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EAL  
UTSTANDING  
NIQUE  
IAMOND  
**PROUD**  
TECHNOLOGY

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CONFIDENTIAL  
JUNE 2022

No COMMENT

# GLOBAL CHALLENGE: SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE





The Mir mine in Eastern Siberia, Russia. Diamond mining involves the removal of vast amounts of earth and rock creating holes so big they can be seen from space.



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS





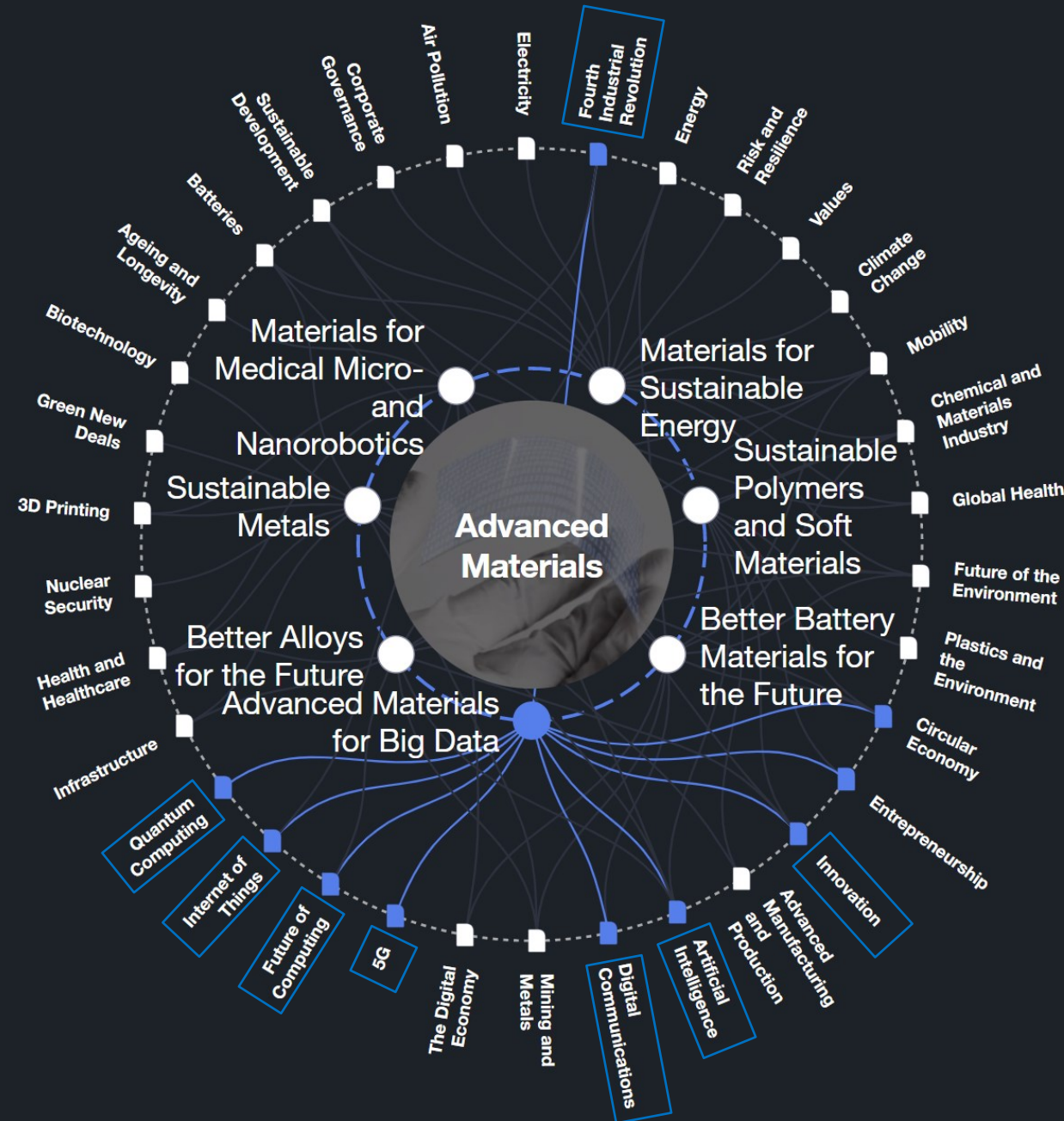
"The Butcher" The 285-ton giant is diamond miner De Beers' hi-tech tool to collect diamonds off the coast of Namibia



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# GLOBAL CHALLENGE AND OPPORTUNITY



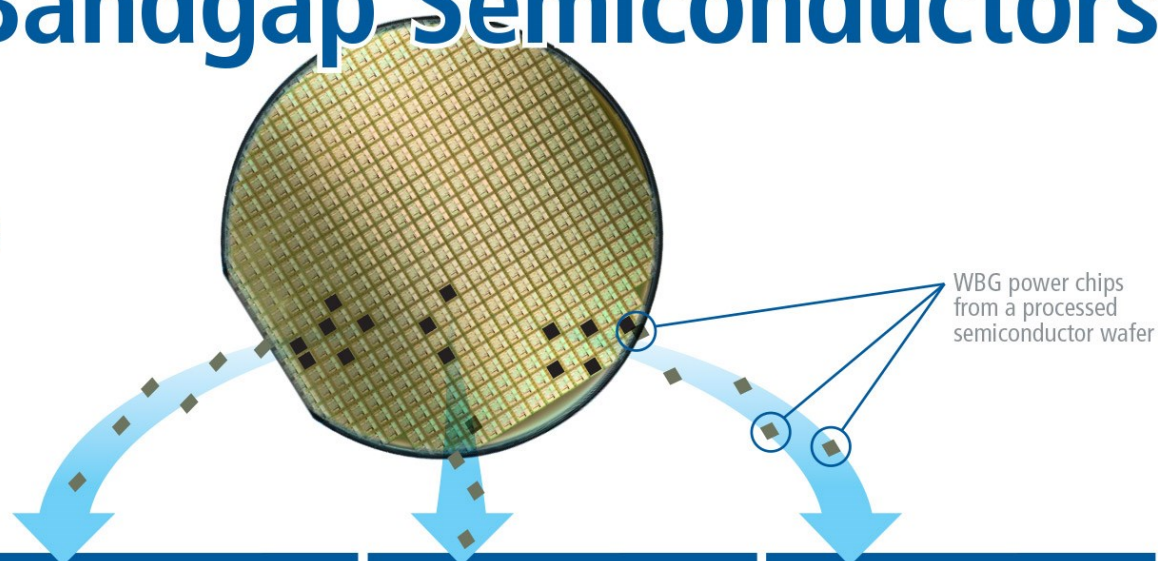
RAPID INNOVATION AND LOWERING COSTS HAVE **DRAMATICALLY INCREASED** ACCESS TO ELECTRONIC PRODUCTS AND DIGITAL TECHNOLOGY, WITH MANY BENEFITS. THIS HAS LED TO AN INCREASE IN THE USE OF DIGITAL SERVICES, ELECTRONIC DEVICES AND EQUIPMENT. THE **UNINTENDED CONSEQUENCE** OF THIS IS A **BALLOONING** OF ELECTRONIC AND ELECTRICAL E-WASTE, **ENERGY CONSUMPTION**, NATURAL RESOURCES AND **CO<sub>2</sub> EMISSION**.

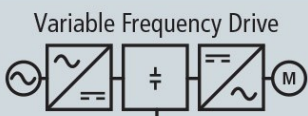








WORLD ECONOMIC FORUM



# Wide Bandgap Semiconductors

to increase the energy efficiency and reliability of power electronics



Application	Industrial Motor Systems	Consumer Electronics and Data Centers	Conversion of Solar and Wind Energy
Power Electronic System	Variable Frequency Drive 	Rectifier 	Inverter 
End Use			
Energy Savings Potential*	1 Million Homes 	1.3 Million Homes 	700,000 Homes 

## POWER ELECTRONICS

Climate change has emerged as the preeminent threat that could destabilize global systems with the onset of sea level rise, extreme weather events, and extreme temperatures affecting every aspect of our civilization. A global consensus is growing towards a carbon free economy encompassing a holistic approach of sustainable growth and security of energy supply. Clean energy and energy efficiency form the key elements of this strategy.

Power electronics is seen to be the disruptive technological breakthrough that facilitates a paradigm shift towards an energy transition to clean energy as well as a major enabler for electrification and energy efficiency. Power electronics enable extremely efficient conversion of electrical power, provide optimal conditions for transmission and distribution, and enable system level digitalization.

Thus, the amount of electricity processed by power electronic components, viz. SiC and GaN, will double over the next decade, reaching up to 80% by 2030



# INDUSTRY & TECHNOLOGY CHALLENGE – PROBLEM

## ADVANCED MATERIALS



### LUXURY

#### FOR 1 CARAT EXTRACTED\*

- 1000+ TONS OF EARTH REMOVED
- 3000+ LITERS OF WATER USED
- 500+ KG OF AIR POLLUTION RELEASED
- 100+ KG OF CARBON DIOXIDE EMITTED

SUPPLY OF HIGH-GRADE DIAMOND IS A CHALLENGE.

NATURAL DIAMOND EXTRACTION HAS STRONG NEGATIVE IMPACTS ON THE ENVIRONMENT, HEALTH, WATER USAGE, SOCIAL JUSTICE AND AIR QUALITY.

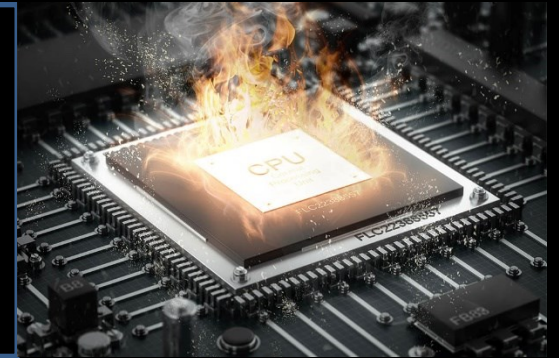
\* Environmental Impacts of Mined Diamonds, Dr. Gbemi Oluleye, 2021



### HIGH-TECH

#### IMPACT OF TEMPERATURE ON SEMICONDUCTORS

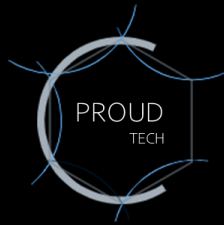
- REDUCE DEVICE LIFETIME
- LIMIT THE DEVICE PERFORMANCE
- INCREASE THE POWER CONSUMPTION



CURRENT METHODS FOR THERMAL MANAGEMENT


NO LONGER EFFECTIVE TO ADDRESS NEW GENERATION OF SEMICONDUCTORS

“ICT’S SHARE OF GLOBAL GREENHOUSE GAS EMISSIONS ACTUALLY LIES BETWEEN 2.1-3.9 %. ICT GHG EMISSIONS COULD BE AS HIGH AS 8 % BY 2025»



# ADVANTAGES OF MP CVD DIAMOND

- THE HIGHEST KNOWN THERMAL CONDUCTIVITY
- THE HIGHEST KNOWN RESISTANCE TO THERMAL SHOCK
- THE BROADEST OPTICAL TRANSMISSION SPECTRUM
- A WIDE ELECTRONIC BAND GAP
- A VERY LOW COEFFICIENT OF FRICTION
- EXCELLENT ELECTRIC INSULATOR PROPERTIES
- EXCELLENT P-TYPE (IIB TYPE) SEMICONDUCTOR PROPERTIES
- CHEMICALLY AND BIOLOGICALLY INERT (RESISTANCE TO ANY ACID AND BASE)

PARAMETER	Si	SiC	GaN	 DIAMOND
THERMAL CONDUCTIVITY [W/M.K]	130	460	140	2000
BANDGAP [eV]	1.12	3.26	3.45	5.45
CRITICAL ELECTRIC FIELD (E <sub>C</sub> ) [MV/CM]	0.3	2.2	3.7	10
MOBILITY [CM²/Vs]	1450	700	1200	2000
BALIGA FIGURE OF MERIT (RELATIVE TO Si)	1	500	1300	23000

DIAMOND IS FAMOUSLY A VERY HARD MATERIAL, BUT IT ALSO HAS THE HIGHEST CHEMICAL STABILITY, AS WELL AS UNIQUE CONDUCTIVITY AND THERMAL SHOCK RESISTANCE.

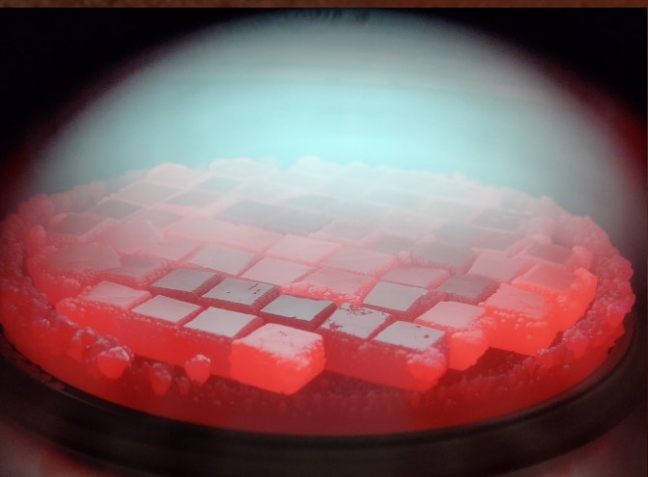
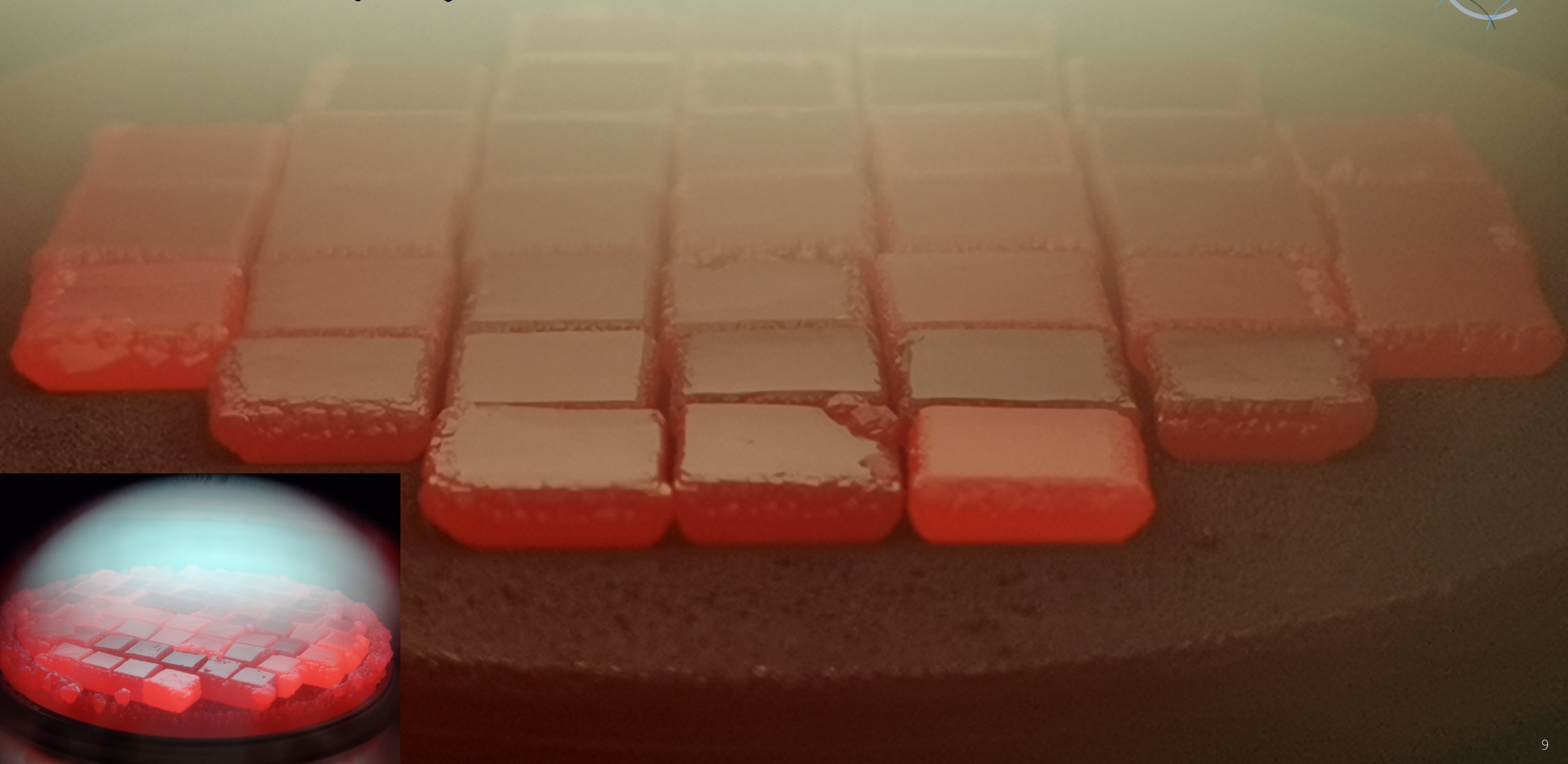
CVD DIAMOND OFFERS OUTSTANDING PHYSICAL PROPERTIES	TO A BROAD RANGE OF HIGH-TECH APPLICATIONS
TRANSPARENCY	OPTICS
BIOCOMPATIBLE	MEDICAL DEVICES
TAILORED ATOMIC DEFECTS	QUANTUM & SENSORS
HARDEST MATERIAL ON EARTH	MICROMECHANICS
BEST MATERIAL TO DISSIPATE HEAT	PHOTONICS & ELECTRONICS
BEST MATERIAL TO SUSTAIN HIGH VOLTAGE	POWER ELECTRONICS
BEST MATERIAL TO WORK IN HARSH ENVIRONMENT	SPACE & DETECTORS





# PROUD TECHNOLOGY : CVD LAB-GROWN DIAMOND

SWISS LAB-GROWN DIAMOND



# PROUD TECHNOLOGY : ADVANCED MATERIALS

## PRODUCTS ▯ SOLUTIONS ▯ SERVICES

SWISS LAB-GROWN DIAMOND



### LUXURY

- AS-GROWN OR PRE-SHAPED
- CUT & POLISHED
- FANCY COLOR
- MICRO-MECHANICS

- CERTIFIED BY GIA, IGI, HRD, GGTL
- 100 % SWISS MADE
- 100 % ETHICAL AND SUSTAINABLE
- 100 % TRACEABLE

### HIGH-TECH

#### ■ SEMICONDUCTOR

- TRI-WAFER Diamond on GaN on Si (EPFL IP)
- BI-WAFER Diamond on GaN (EPFL IP)

#### ■ HIGH VOLTAGE

- DIAMOND-BASED TRANSISTORS

#### ■ HIGH FREQUENCIES

- DIAMOND-BASED POWER AMPLIFIER

#### ■ HIGH ENERGY LASER

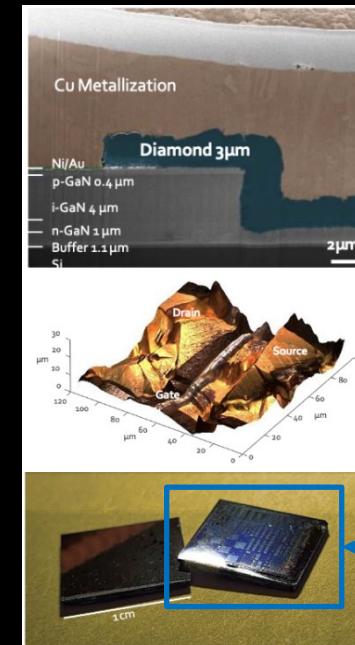
#### ■ SENSOR

- AGGRESSIVE ENVIRONMENT (SPACE, RADIATION, CHEMICALS)
- VERY LOW MAGNETIC FIELD DETECTION (MEDICAL, MATERIAL CHARACTERIZATION)

### LAB ACHIEVEMENTS

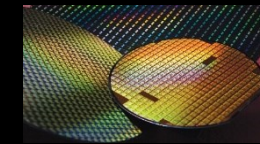
HIGH QUALITY DIAMOND ON SEMICONDUCTOR SUBSTRATE

- HIGH-QUALITY LAB-GROWN DIAMOND ON GAN
- PATENTED TECHNOLOGY



### LAB ONGOING PROJECTS

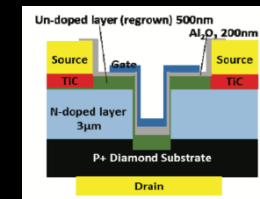
HIGH QUALITY DIAMOND  
ON ≠ SEMICONDUCTOR SUBSTRATE



DIAMOND-BASED PIN  
DIODE HETEROSTRUCTURE



HIGH VOLTAGE P-CHANNEL MOSFET





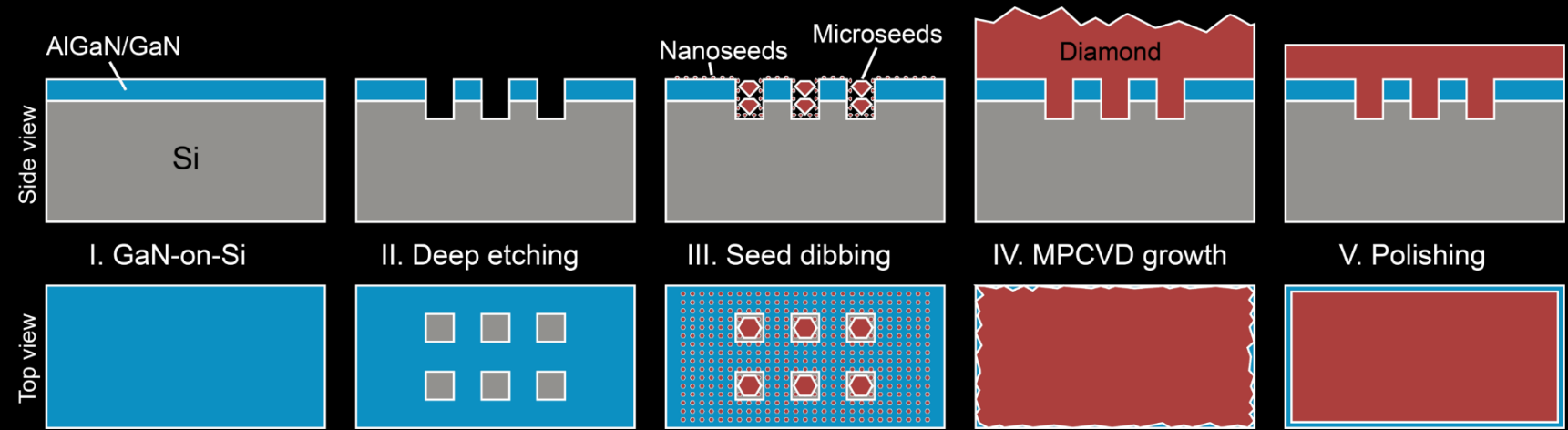
# PROUD TECHNOLOGY : DEMONSTRATED TECHNOLOGY

PATENT FILLED WITH TTO

EPFL

OUR STATE-OF-ART FABRICATION METHOD

INSPIRED BY AN  
AGRICULTURAL METHOD



## SEED DIBBLING DIAMOND GROWTH

- RELIABLE METHOD TO GROW HIGH QUALITY DIAMOND ON GAN
- COMPLETELY SOLVED THE ISSUE OF DELAMINATION
- ENABLED THE POLISHING OF DIAMOND
- OPENS PATHS FOR THE DEVELOPMENT OF FUTURE DEVICES

## DIAMOND TRANSISTOR ON GAN

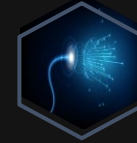
- EXCELLENT PERFORMANCES WITH A SIMPLE STRUCTURE AND FABRICATION PROCESS
- HIGH POTENTIALS FOR INTEGRATED CIRCUITS WITH GAN (CMOS, LOGICS, GATE DRIVER, POWER SWITCHES)

## DIAMOND NEAR JUNCTION HEAT SPREADERS

- HIGHLY EFFICIENT IN REDUCING THE THERMAL RESISTANCES (2.5X) AND THERMAL GRADIENTS
- THE THERMAL PERFORMANCE OF GAN-ON-SI WAS UPGRADED TO SIMILAR PERFORMANCES OF GAN-ON-DIAMOND SUBSTRATES

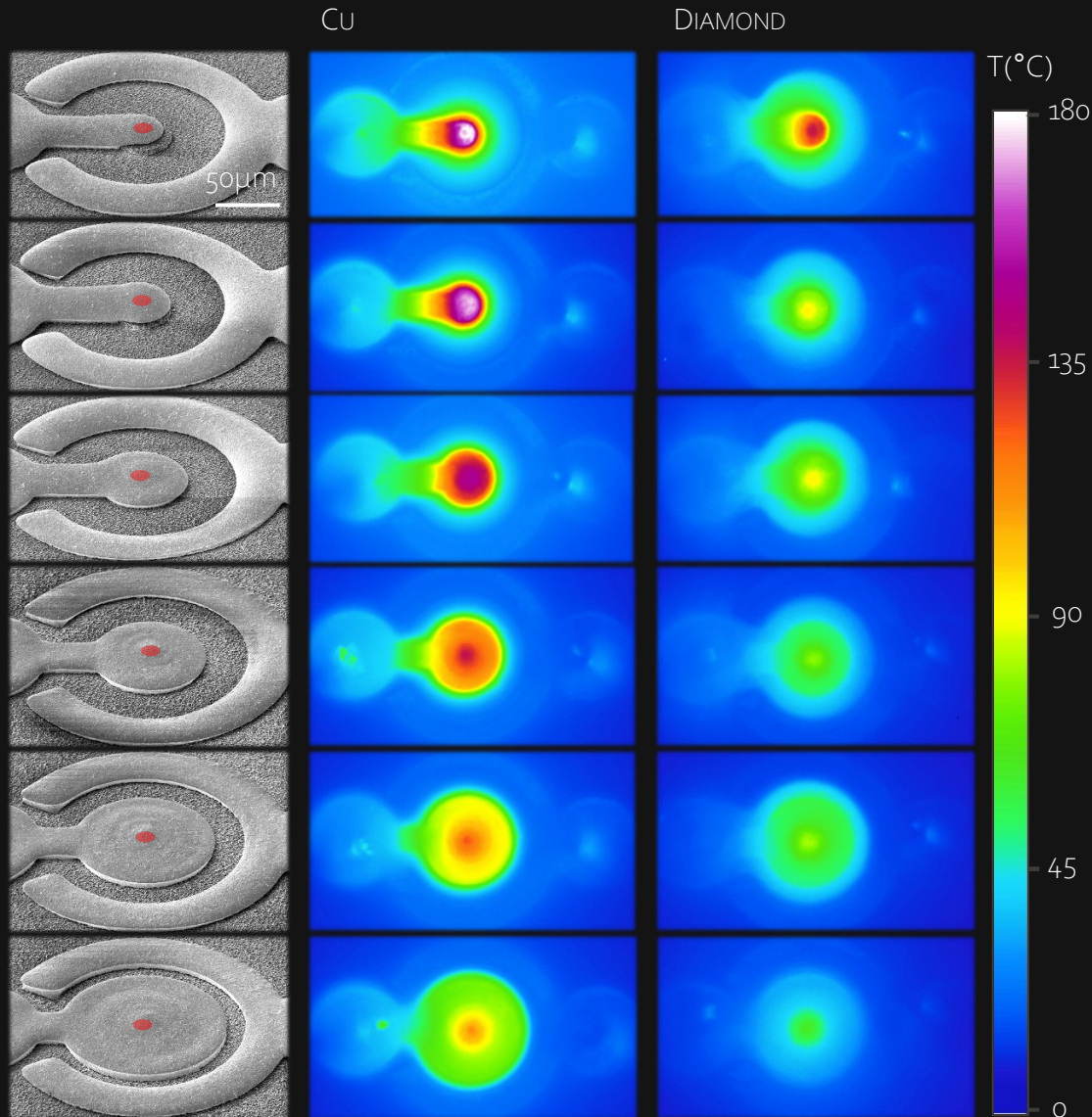


# PROUD TECHNOLOGY : DEMONSTRATED TECHNOLOGY



OUR STATE-OF-ART FABRICATION METHOD

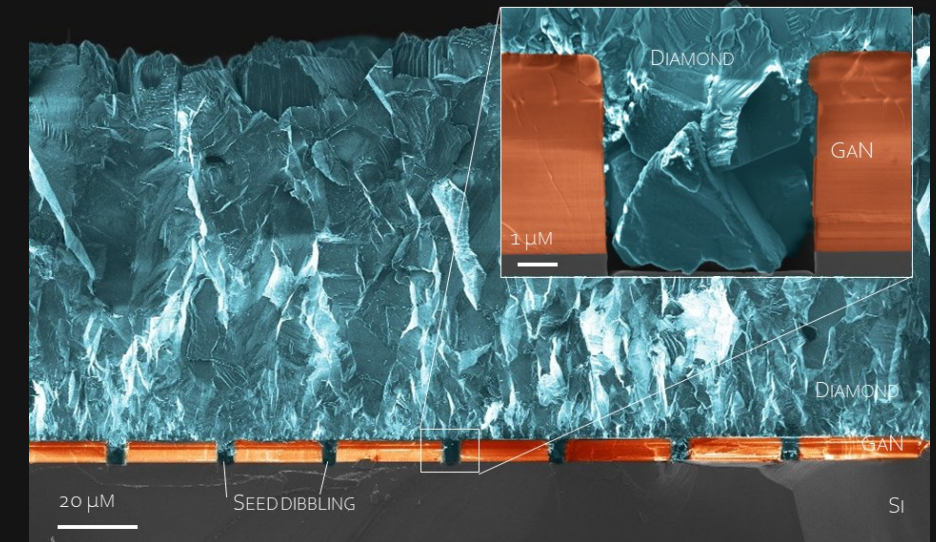
## STEADY-STATE TEMPERATURE WITH HEAT SPREADERS



DIAMOND **HEAT SPREADERS** ARE VERY EFFICIENT:

- 3 μm DIAMOND ON **AFFORDABLE** GAN-ON-SI SUBSTRATES
- **50°C** OF TEMPERATURE **REDUCTION** !
- ELECTRONIC **LIFETIME** MULTIPLY BY **5** !
- **THERMAL DISSIPATION** CAPACITY MULTIPLY BY **7** (VS SI OR GAN) !

CVD DIAMOND GROWTH ON GAN-ON-SI



PATENT FILLED WITH TTO

EPFL



# MARKETS & TRENDS : OVERVIEW



## LUXURY



## HIGH-TECH

GLOBAL JEWELRY MARKET  
(2020)

\$ 330 Bn

GLOBAL **DIAMOND**  
JEWELRY MARKET (2020)

\$ 80 Bn  
CAGR +3.0%

GLOBAL **LAB-GROWN DIAMOND**  
MARKET BY 2030

\$ 49.9 Bn

GLOBAL **LAB-GROWN DIAMOND**  
MARKET (2020)

\$ 19,3 Bn  
CAGR 9.4%

GLOBAL GAN SEMICONDUCTOR  
DEVICES MARKET (2030)

\$ 72.8 Bn

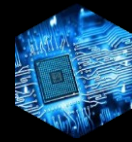
GLOBAL GAN SEMICONDUCTOR  
DEVICES MARKET (2021)

\$ 12.08 Bn  
CAGR +22,1%

GLOBAL **GAN ON DIAMOND**  
SEMICONDUCTOR SUBSTRATES  
MARKET (2028)

\$ 179.3 Mn

**DIAMOND ON GAN ON Si**  
SEMICONDUCTOR SUBSTRATES  
MARKET (START 2023)



# MARKET LANDSCAPE

TARGETED HIGH-TECH COMPANIES



## POWER ELECTRONICS

ABB SUMITO ELECTRIC  
EATON INFINEON  
L3HARRIS NXO  
RENESAS TOSHIBA  
FUJI ELECTRIC FE

MICROSEMI CORPORATION

STMICROELECTRONICS

ROCKWELL AUTOMATION

TEXAS INSTRUMENTS

PRYSMIAN GROUP

MITSUBISHI ELECTRIC

## QUANTUM COMPUTING

QUANTUM BRILLIANCE  
PSI QUANTUM  
XANADU  
Q-CTRL RIGETTI  
DWAVE SEEQC

## HARDWARE

DOVER MICROSYSTEMS  
TENSTORRENT  
RASPBERRY PI  
MSI CLOUNIX  
ASUS GRAQ

## SEMICONDUCTOR MANUFACTURER FOUNDRY

WIN SEMICONDUCTORS TSMC  
SAMSUNG POWERCHIP  
HUAHONG GROUP UMC  
GLOBAL FOUNDRIES SMIC  
TOWER SEMICONDUCTOR

## SEMICONDUCTOR MANUFACTURER WAFER

BUHLER GROUP SILTRONIC  
TMGCORE  
SOITEC  
NTT  
IQE

## FABLESS

AEONSEMI  
WILIOT  
USOUND  
AEPONYX  
SCALINX

## FABS

KIOXIA  
SMIC SJSEMI  
CANSEMI ZTE  
SMART PHOTONICS

## SENSORS

SOREXSENSORS  
SKYRORA  
DISPLAY

## LIDAR

LEDDARTECH  
LUNEWAVE  
SOSLAB  
TRIEYE

## AI CHIPS

KNERON  
ENFLAME  
UNTETHER AI  
ANOTHER BRAIN  
HAILO  
CEREBRAS  
MYTHIC

## CHIP DESIGNER

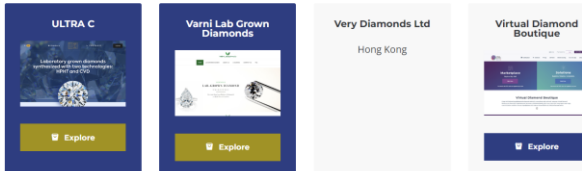
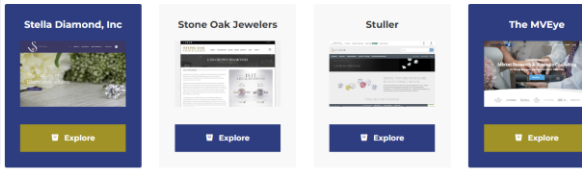
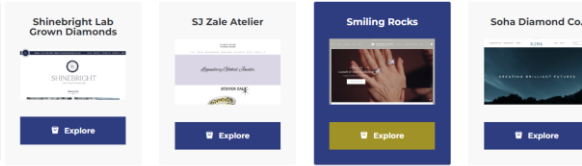
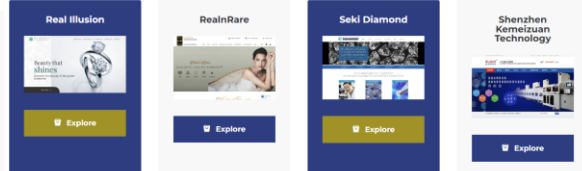
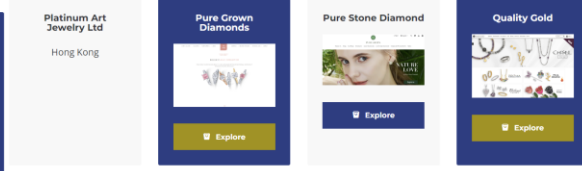
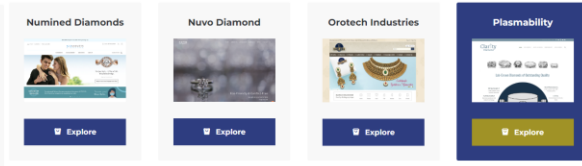
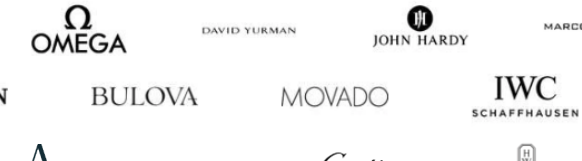
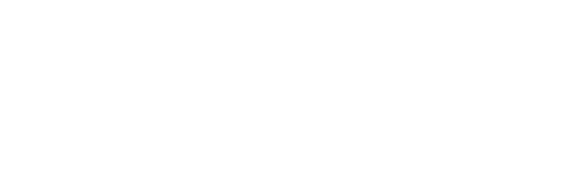
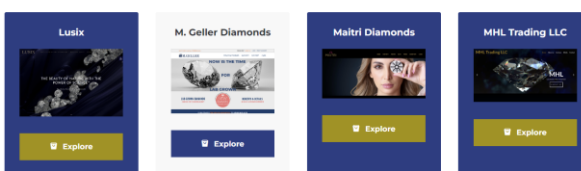
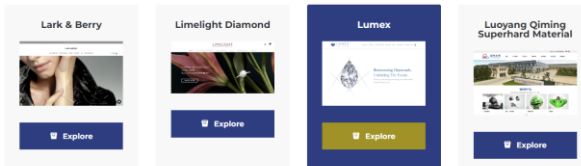
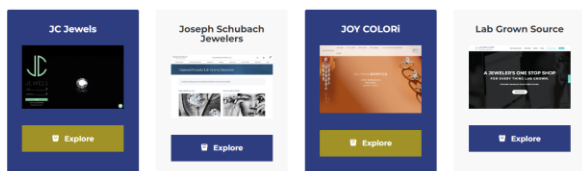
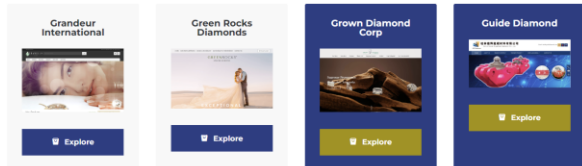
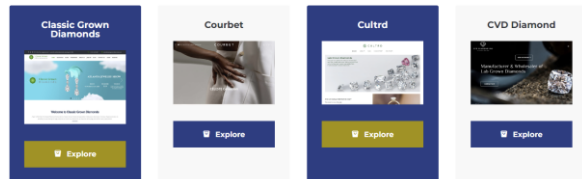
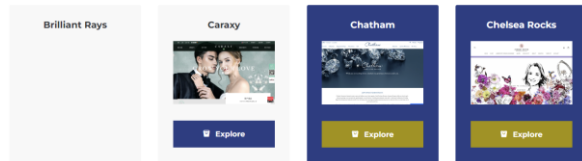
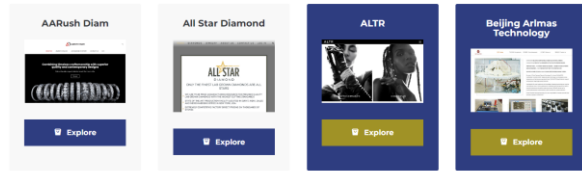
SAMSUNG  
INTEL  
NVIDIA  
HUAWEI AMD  
THALES IBM





# MARKET LANDSCAPE

## TARGETED PRESTIGIOUS LUXURY BRANDS



### KEY PARTNERS

- HIGH-TECH COMPANIES
- WAFER MANUFACTURERS
- LUXURY WATCH MANUFACTURERS
- CVD REACTOR MANUFACTURERS
- INSTITUTES OF TECHNOLOGY AND RESEARCH CENTERS
- EPFL, CERN
- CUTTING & POLISHING NETWORK
- GOVERNMENTS AGENCIES
- KEY OPINION LEADERS

### REVENUE STREAMS

- HIGH-TECH
- LUXURY
- CUSTOMER PROJECTS
- MANAGED SERVICES
- LICENSING & ROYALTIES
- RESEARCH GRANTS

### VALUE PROPOSITION

- HIGH QUALITY SWISS LAB-GROWN DIAMOND
- COST EFFECTIVE & VALUE FOR MONEY
- RELIABLE SUPPLY CHAIN
- ETHICAL & SUSTAINABLE

### NEXT GENERATION OF SEMI-CONDUCTOR WAFER

TRI WAFER DIAMOND ON GAN ON SI WITH ENHANCED PHYSICAL PROPERTIES THAN TRADITIONAL ELECTRONIC WAFERS AT AN AFFORDABLE PRICE

### KEY RESOURCES

- CVD REACTORS
- CUTTING & POLISHING EQUIPMENT
- HUMAN RESOURCES
- PRODUCT & TECHNOLOGY
- INTELLECTUAL PROPERTY

## PROUD TECHNOLOGY



### KEY ACTIVITIES

- INNOVATION & DEVELOPMENT
- CVD DIAMOND ON WAFER FOR ELECTRONICS
- CVD DIAMOND GEMS FOR LUXURY GOODS
- CUTTING & POLISHING
- CO-DEVELOPMENT
- PROFESSIONAL SERVICE

### CUSTOMER SEGMENTS

▪ THERMAL MANAGEMENT SUPPLIERS ▪ RF SYSTEM INTEGRATORS ▪ SEMICONDUCTOR FOUNDRIES ▪ WAFER MANUFACTURERS ▪ HEALTHCARE & LIFE SCIENCES ▪ GOVERNMENT AGENCIES ▪ LUXURY GROUPS ▪ INSTITUTES OF TECHNOLOGY AND RESEARCH CENTERS ▪ TELECOMS & ENERGY





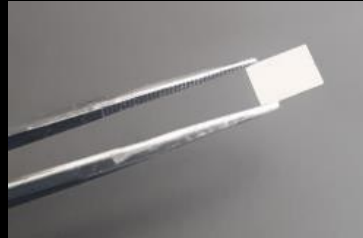


# PROUD TECHNOLOGY : CVD LAB-GROWN DIAMOND

SWISS LAB-GROWN DIAMOND



100 % REUSABLE DIAMOND SUBSTRATE



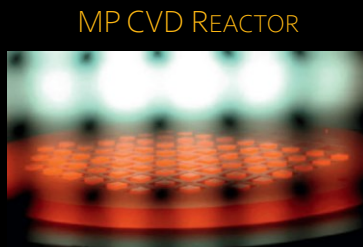
DIAMOND SUBSTRATE  
AS A SEED MATERIAL



GASES ARE INTRODUCED IN  
THE DEPOSITION CHAMBER

PLASMA IS FORMED

DIAMOND GROWTH STARTS



MP CVD REACTOR

CUT & POLISH



CARBON DIOXIDE EMITTED  
COMPENSATED



CLOSED LOOP WATER-CIRCUIT



100 % GREEN ENERGY SWISS  
HYDRAULIC POWER

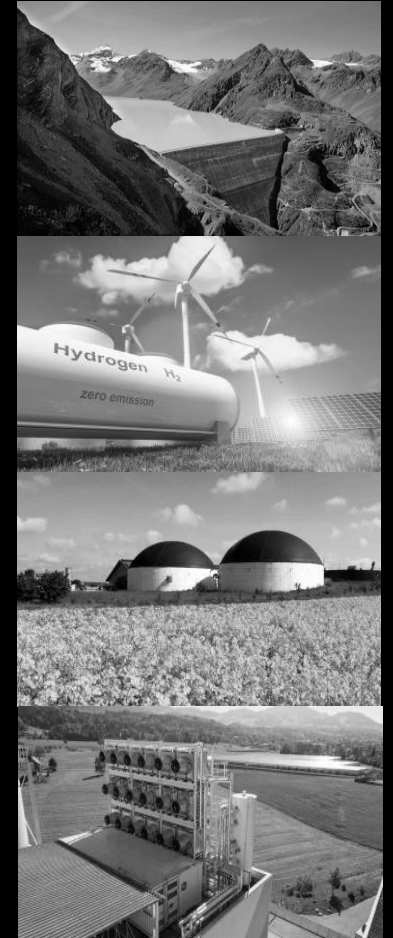


GREEN HYDROGEN PRODUCTION  
WITH RENEWABLES ENERGIES



BIO-METHAN FROM ORGANIC  
MATERIALS

CO<sub>2</sub> FROM THE AIR SWISS-  
MADE SOLUTION





# PROUD TECHNOLOGY : CVD LAB-GROWN DIAMOND

SWISS LAB-GROWN DIAMOND



## PRODUCTION SITE (SUISSE ROMANDE)

- EQUIPMENT (REACTORS FOR GROWTH & POST-TREATMENTS)
- 20 MIN FROM EPFL AND 40 MIN FROM GENEVA
- ACCESS TO SWISS RENEWABLES ENERGIES
- SECURED AREA

## TRANSFORMATION SITE (GENEVA, FREE PORTS) – 1ST AUGUST 2022

- EQUIPMENT (POLISHING MACHINES, LASER SYSTEMS & CHEMICALS)
- DIRECT ACCESS TO PARTNERS & CUSTOMERS
- EASY ACCESS TO DIAMOND SETTER
- ACCESS TO LAB PARTNERS (GGTL)
- SECURED AREA

## STRATEGIC PARTNERS (SWITZERLAND, FRANCE, GERMANY)

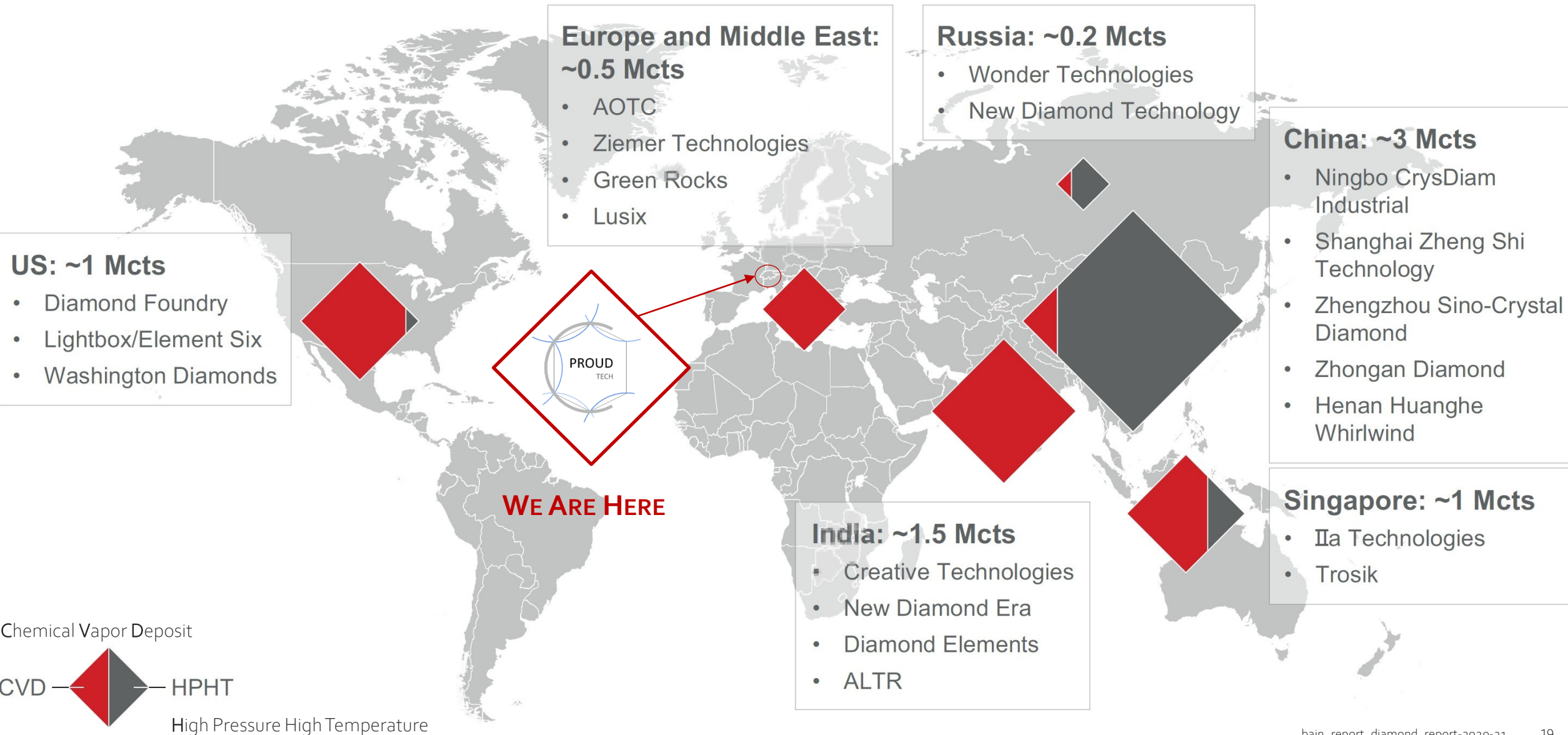
OUR ECOSYSTEM







# COMPETITIVE ANALYSIS





# COMPETITIVE ANALYSIS

## ADVANCED POWER ELECTRONICS



### DIAMOND-ON-GAN

- **FUJITSU LABORATORIES:** FUJITSU AIMS TO COMMERCIALIZE IMPROVED-HEAT-DISSIPATION GAN HEMT AMPLIFIERS IN YEAR 2022 FOR USE IN WEATHER RADAR SYSTEMS AND NEXT-GENERATION WIRELESS COMMUNICATION SYSTEMS. THEY USE A DIFFERENT APPROACH THAN PROUD TECHNOLOGY. USING A MIX OF DIAMOND AND GRAPHITE.

### GAN-ON-DIAMOND

- **ELEMENT SIX** (R&D)
- **AKASH SYSTEMS** (SPACE APPLICATIONS : POWER AMPLIFIER AND RADIO-TRANSMITTER BASED ON GAN-ON-DIAMOND SUBSTRATE). AKASH SYSTEMS AIMS TO DEVELOP A NEW GENERATION OF SMALLER, LIGHTER, MORE EFFICIENT SATELLITES AND THE COMPONENTS THAT POWER THEM TO PAVE THE WAY FOR LOWER LAUNCH COSTS, LOWER COST PER BIT, MORE LAUNCH CYCLES, IMPROVED ACCESS, AND HIGHER COMMUNICATION SPEEDS.
- **QORVO** (MILITARY AND TELECOM 5G, 6G 7G APPLICATIONS): QORVO IS AN AMERICAN SEMICONDUCTOR COMPANY THAT DESIGNS, MANUFACTURES, AND SUPPLIES RADIO-FREQUENCY SYSTEMS FOR APPLICATIONS THAT DRIVE WIRELESS AND BROADBAND COMMUNICATIONS, AS WELL AS FOUNDRY SERVICES. THEY WORK WITH GAN-ON-DIAMOND TECHNOLOGY FOR MILITARY APPLICATIONS (WITH LOCKHEED MARTIN, DARPA PROJECT).
- **RFHIC CORPORATION** : RFHIC IS A COMPANY SPECIALIZED IN GAN TECHNOLOGY FOR THE FABRICATION OF MW GENERATOR SYSTEM. RFHIC CORPORATION PURCHASED GAN ON DIAMOND IP FROM E6 – A PART OF THE DEBEER'S GROUP BACK IN 2017 AND HAS DEVELOPED THE WORLD'S FIRST COMMERCIALIZED GAN ON DIAMOND TRANSISTOR FOR DEFENSE, MILCOM, RF ENERGY, AND COMMUNICATION APPLICATIONS. THEY DO NOT PUBLICLY COMMERCIALIZE ANY GAN ON DIAMOND TRANSISTOR SO FAR. THEY ONLY OFFER GAN-ON-SIC TRANSISTOR.
- **MITSUBISHI ELECTRIC CORP**
- **DIAMOND FOUNDRY**

### GRAPHENE

CARDEA

PARAGRAF

NANOTECH ENERGY

SKELETON TECHNOLOGIES

### GALLIUM NITRIDE GAN

GAN SYSTEMS

VISIC TECHNOLOGIES

EXAGAN

### SILICON CARBIDE SIC

SGKS

GENESIC

PALLIDUS



LIGIA COLINA  
CEO - CFO



LIGIA COLINA HOLDS A PhD IN PLASMA PHYSICS & PROCESS ENGINEERING FROM THE UNIVERSITY OF SORBONNE PARIS CITÉ AND AN MBA IN MANAGEMENT OF INNOVATION FROM EPFL. WITH A DECADE OF EXPERIENCE IN PROCESS AND PRODUCT DEVELOPMENT, LIGIA ALSO MASTERS ALL THE CODES OF THE START-UP ENVIRONMENT AND THE ASSOCIATED MARKETING STRATEGY. MOREOVER, LIGIA HAS A SIGNIFICANT EXPERIENCE IN THE CREATION OF ACADEMIC AND INDUSTRIAL PROJECTS WITH ASSOCIATED FUND RAISING. SHE IS ONE OF THE ESSENTIAL PILLARS FOR PROUD'S SUCCESS.

MEHDI NAAMOUN  
CTO - COO



MEHDI NAAMOUN, PH.D. IN MATERIALS PHYSICS, TRAINED IN AN INTERNATIONALLY RENOWNED LABORATORY IN PARIS, HAS BEEN IMMERSSED IN THE FIELD OF DIAMOND AND CVD GROWTH FOR MORE THAN 13 YEARS NOW. HE IS AN EXPERT IN CVD DIAMOND GROWTH (WHICH WAS THE SUBJECT OF HIS PHD THESIS) AND HIS SCIENTIFIC CONTRIBUTION HAS BEEN VALUED BY NUMEROUS PUBLICATIONS IN PEER-REVIEWED JOURNALS AND 5 INTERNATIONAL PATENTS.

DURING HIS VARIOUS EXPERIENCES, DR NAAMOUN HAS ACQUIRED A UNIQUE EXPERTISE COMBINING THE INDUSTRIALIZATION OF DIAMOND GROWTH FOR VARIOUS HIGH-TECH APPLICATIONS AS WELL AS A DEEP KNOWLEDGE OF THE JEWELRY AND WATCH MANUFACTURING MARKET. MOREOVER, THANKS TO HIS STRONG NETWORK WITHIN THE DIAMOND COMMUNITY, HE IS ONE OF THE MAJOR ASSETS FOR THE FUTURE SUCCESS OF THE COMPANY.

JEAN-BAPTISTE DECORZENT  
CSO - CMO



JEAN-BAPTISTE HOLDS A BS IN ELECTRICAL ENGINEERING, AUTOMATION & ROBOTICS FROM THE HES-SO OF GENEVA AND AN MBA IN MANAGEMENT OF TECHNOLOGY FROM EPFL. JB HAS MORE THAN 20 YEARS OF EXPERIENCE IN BUSINESS DEVELOPMENT AND STRATEGIC PLANNING FOR GLOBAL ENTITIES RANGING FROM START-UPS AND MULTINATIONALS TO GOVERNMENTAL AND INTERNATIONAL ORGANIZATIONS. JB HAS ALSO A THOROUGH EXPERTISE IN MOBILE TELECOM (NOKIA, ERICSSON), ICT SYSTEMS AND SOLUTIONS AND A BROAD NETWORK IN THE HIGH-TECH ECOSYSTEM IN SWITZERLAND. JB IS ONE OF THE KEY ELEMENTS FOR THE SUCCESS OF FUTURE PROUD'S FUNDRAISING AND FOR THE IMPLEMENTATION OF PROUD'S LONG-TERM SUSTAINABLE STRATEGY.

## AND GROWING..

- SENIOR CVD DIAMOND ENGINEER, EQUIPMENT & DESIGN
- SENIOR ELECTRICAL ENGINEER, THERMAL & HIGH-POWER DEVICES
- MICRO ENGINEER, CLEANROOM APPLICATIONS
- TECHNICIAN
- ADMINISTRATION ASSISTANT
- MARKETING AND SALES MANAGER

ISAAC CHAN  
CIO

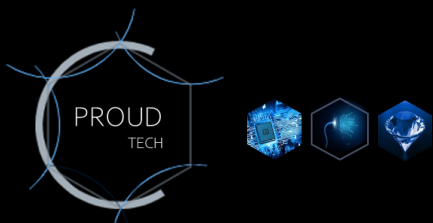


ISAAC CHAN HOLDS A BS IN BUSINESS ACCOUNTING & FINANCE FROM THE UNIVERSITY OF SOUTH WALES AND A MASTER'S IN BUSINESS ADMINISTRATION FROM THE UNIVERSITY OF MANCHESTER. ISAAC HAS MORE THAN 10 YEARS OF MULTIPLE STARTUPS EXPERIENCE INCLUDING END TO END OPERATION, GROWTH HACKING AND BUSINESS DEVELOPMENT (2 X SUCCESSFUL FUNDING ROUND, 1 X PUBLIC TOKEN LISTING). HE HAS STRONG NETWORK IN CHINA AND TAIWAN (NATIVE SPEAKER OF MANDARIN AND CANTONESE) THANKS TO HIS 15 YEARS OF MULTINATIONAL CORPORATION MANAGEMENT EXPERIENCE ESPECIALLY DIGITAL MARKETING AND eCommerce (FULL P&L RESPONSIBILITY AND 5 MANAGERIAL DIRECT REPORTS). ISAAC IS OF GREAT SUPPORT IN THE DEVELOPMENT OF PROUD'S DIGITAL STRATEGY AND CONNECTING TO KEY PARTNERS AND CUSTOMERS IN ASIA.

ELISON MATIOLI  
SCIENTIFIC ADVISOR



ELISON MATIOLI IS AN ASSOCIATE PROFESSOR OF ELECTRICAL AND MICRO ENGINEERING, AT EPFL. HIS RESEARCH INTERESTS ARE IN THE FIELDS OF WIDE-BAND-GAP SEMICONDUCTOR DEVICES FOR POWER AND ULTRAFAST ELECTRONICS, POWER CONVERSION, AND THERMAL MANAGEMENT OF ELECTRONICS. PROF. MATIOLI RECEIVED NUMEROUS PRIZES FOR HIS OUTSTANDING WORK SUCH AS THE UCSB OUTSTANDING GRADUATE STUDENT SCIENTIFIC ACHIEVEMENT AWARD FOR HIS PH.D. THESIS, THE 2013 IEEE GEORGE SMITH AWARD, THE 2015 ERC STARTING GRANT AWARD, THE 2016 SNSF ASSISTANT PROFESSOR ENERGY GRANT AWARD, AND THE 2020 UNIVERSITY LATSIIS AWARD FOR HIS WORK. AS A SCIENTIFIC ADVISOR, PROF. ELISON MATIOLI IS A GREAT ASSET FOR PROUD IN THE DEVELOPMENT OF NEW GENERATION OF POWER ELECTRONICS DEVICES AND BENEFITING OF HIS BROAD ACADEMIC AND INDUSTRIAL NETWORK.



# STRUCTURE & STRATEGIC PARTNERS

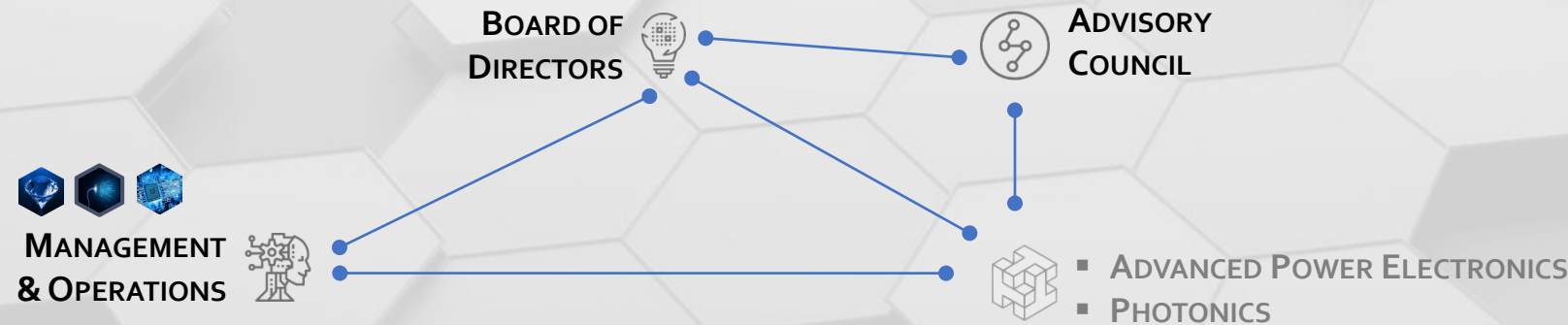
PROUD TECHNOLOGY



HIGHEST AUTHORITY IN PROUD TECH, WITH SUPERVISORY POWERS. ITS RESPONSIBILITIES INCLUDE CHANGES TO PROUD TECH'S STATUTES, NOMINATION OF THEMATIC FOCUS GROUPS, AND APPROVAL OF THE ANNUAL BUDGET AND FINANCIAL REPORT.

TAKES THE DECISIONS NECESSARY TO ACHIEVE THE AIMS OF PROUD TECH, SUCH AS DEFINING THE SCIENTIFIC STRATEGY AND INTERNAL PROCEDURES, AND ALLOCATING PUBLIC FUNDS TO SERVICE AND INFRASTRUCTURE ACTIVITIES.

ACT AS A CONSULTATIVE BODY, PROVIDING RECOMMENDATIONS TO THE BOARD OF DIRECTORS AND THE THEMATIC FOCUS GROUPS. ITS MAIN TASKS CONSIST IN MONITORING SERVICES AND INFRASTRUCTURE ACTIVITIES AS PROUD TECH RESOURCES.



DEFINE AND IMPLEMENT PROUD TECH'S STRATEGIC GOALS AS WELL AS ENSURING THE ORGANIZATION'S REPRESENTATION AT THE NATIONAL AND INTERNATIONAL LEVEL.

SUPPORT FUNCTIONS INCLUDE FINANCE & GRANT SERVICES, LEGAL & TECHNOLOGY TRANSFER, HUMAN RESOURCES, COMMUNICATION AND PUBLIC RELATIONS, MARKETING AND BUSINESS DEVELOPMENT AND R&D, TRAINING & EDUCATION.

## THEMATIC FOCUS GROUPS

DISCUSSES ALL MATTERS RELATED TO THEMATIC FOCUS GROUP AS A WHOLE AND PROPOSES NEW GROUP LEADERS FOR NOMINATION.

## STRATEGIC PARTNERS DIAMOND CUTTING & EXPERTS



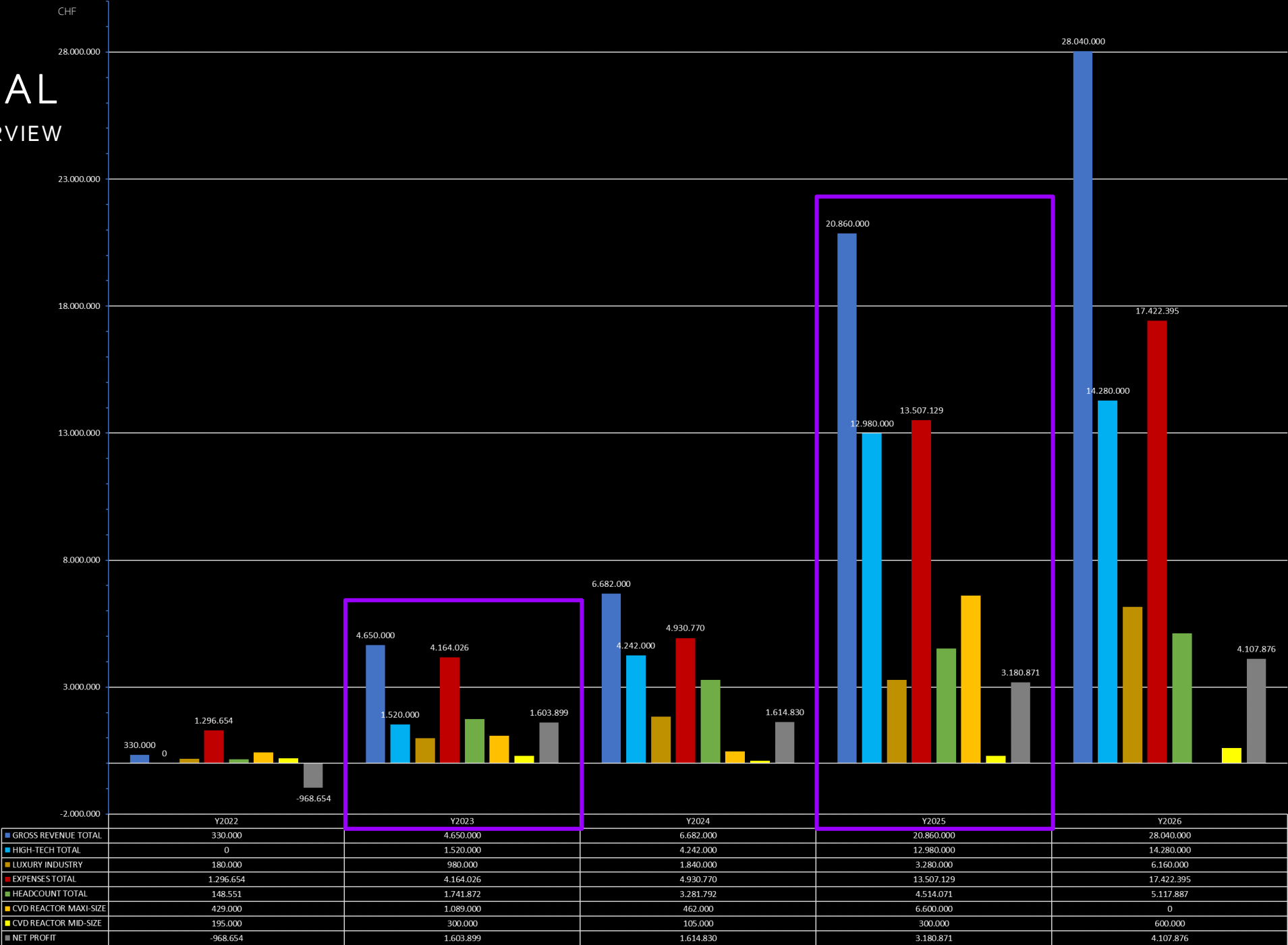
## STRATEGIC PARTNERS

2 SWISS LUXURY WATCHMAKING MAISONS  
1 FRENCH FINE JEWELRY MAISON

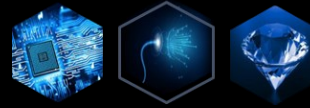




# FINANCIAL OVERVIEW

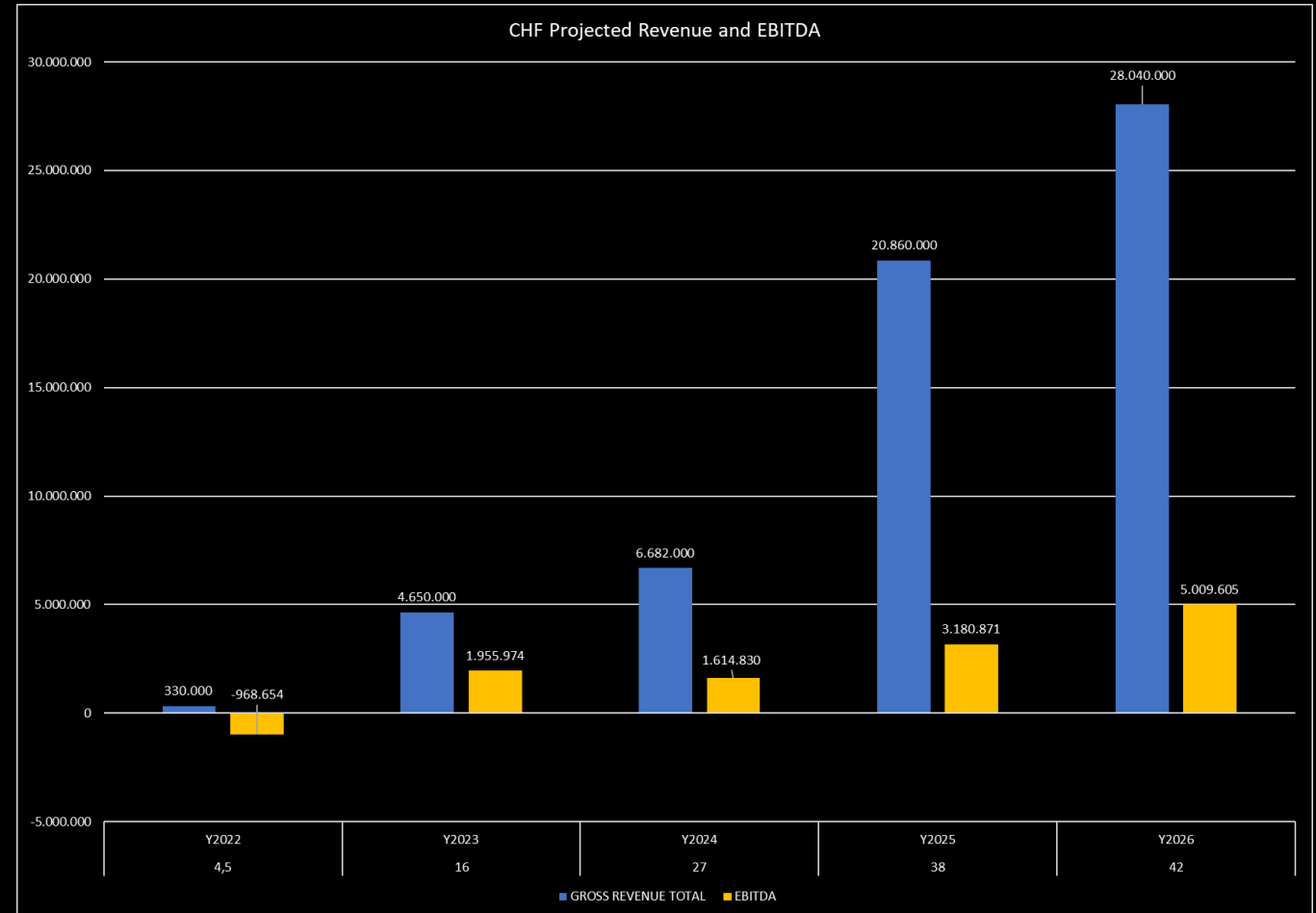


CHF	FTE	4,5	16	27	38	42
	Y2022	Y2023	Y2024	Y2025	Y2026	
GROSS REVENUE TOTAL	330.000	4.650.000	6.682.000	20.860.000	28.040.000	
HIGH POWER - THERMAL CONDUCTIVITY	0	300.000	2.516.000	6.548.000	6.048.000	
HIGH-MID VOLTAGE - BREADOWN FIELD	0	150.000	200.000	200.000	0	
HIGH FREQUENCY - ELECTRON DRIFT VELOCITY	0	300.000	500.000	1.000.000	0	
PHOTONICS - HIGH ENERGY LASER	0	160.000	340.000	480.000	480.000	
PHOTONICS - QUANTUM ENCRYPTION KEY	0	200.000	120.000	360.000	360.000	
SENSOR PROTECTION AGGRESSIVE ENVIRONMENT	0	150.000	246.000	192.000	192.000	
SENSOR - VERY LOW MAGNETIC FIELD DETECTION	0	260.000	320.000	200.000	200.000	
LUXURY INDUSTRY	180.000	980.000	1.840.000	3.280.000	6.160.000	
CUSTOMER PROJECT	150.000	50.000	0	0	0	
RESERVE DIAMOND CASH EQUIVALENT	0	2.100.000	600.000	600.000	600.000	
IP - ROYALTIES PROUD EPFL	0	0	0	4.000.000	7.000.000	
IP - ROYALTIES PROUD MASS PROD	0	0	0	4.000.000	7.000.000	
GRANT TOTAL	80.000	3.000.000	1.500.000	0	0	
COST OF REVENUE - COGS	82.000	1.530.000	1.636.400	4.172.000	5.608.000	
GROSS PROFIT	328.000	6.120.000	6.545.600	16.688.000	22.432.000	
PRE-SEED	4.000.000	0	0	0	0	
SEED	0	0	15.000.000	0	0	
SERIES A	0	0	0	0	15.000.000	
FTE	5	16	27	38	42	
AVG REV / FTE	72.889	382.500	242.430	439.158	534.095	
TOT HEADCOUNT	148.551	1.741.872	3.281.792	4.514.071	5.117.887	
MANAGEMENT	99.440	533.478	837.217	968.778	1.090.368	
ENGINEERING & INNOVATION	38.772	530.530	1.155.406	1.647.325	2.096.596	
OPERATIONS & LOGISTICS	0	186.106	376.088	782.729	782.729	
GENERAL & ADMIN	10.339	87.883	127.948	267.604	300.561	
PHD & INTERNS	0	104.038	284.974	332.198	332.198	
MARKETING & BIZ DEV	0	299.837	500.159	1.030.870	1.030.870	
CAPEX	954.000	1.771.500	731.500	7.490.000	10.681.000	
OPEX - JEWELRY	12.000	135.698	75.528	75.528	75.528	
OPEX - LAB	138.363	306.407	314.400	476.500	481.570	
OPEX - ADMIN	32.540	144.950	186.070	253.590	278.970	
OPEX - MARKETING BIZ DEV	11.200	63.600	281.000	396.000	396.000	
IP EPFL LICENSE ROYALTIES	0	0	60.480	301.440	391.440	
EXPENSES TOTAL	1.296.654	4.164.026	4.930.770	13.507.129	17.422.395	
OPENING CASH	15.274	2.773.029	4.136.453	7.796.720	25.738.264	
CASH IN (REVENUE + NEW CAPITAL)	4.330.000	10.650.000	24.682.000	20.860.000	42.440.000	
CASH OUT (COGS + EXPENSES)	-1.378.654	-5.819.900	-6.740.456	-17.593.473	-22.854.739	
NET CASH	2.951.346	4.830.100	17.941.544	3.266.527	19.585.261	
CLOSING CASH	2.966.620	7.603.129	22.077.997	11.063.247	45.323.525	
EBITDA	-968.654	1.955.974	1.614.830	3.180.871	5.009.605	
(18%) TAXES	0	352.075	0	0	901.729	
NET PROFIT	-968.654	1.603.899	1.614.830	3.180.871	4.107.876	

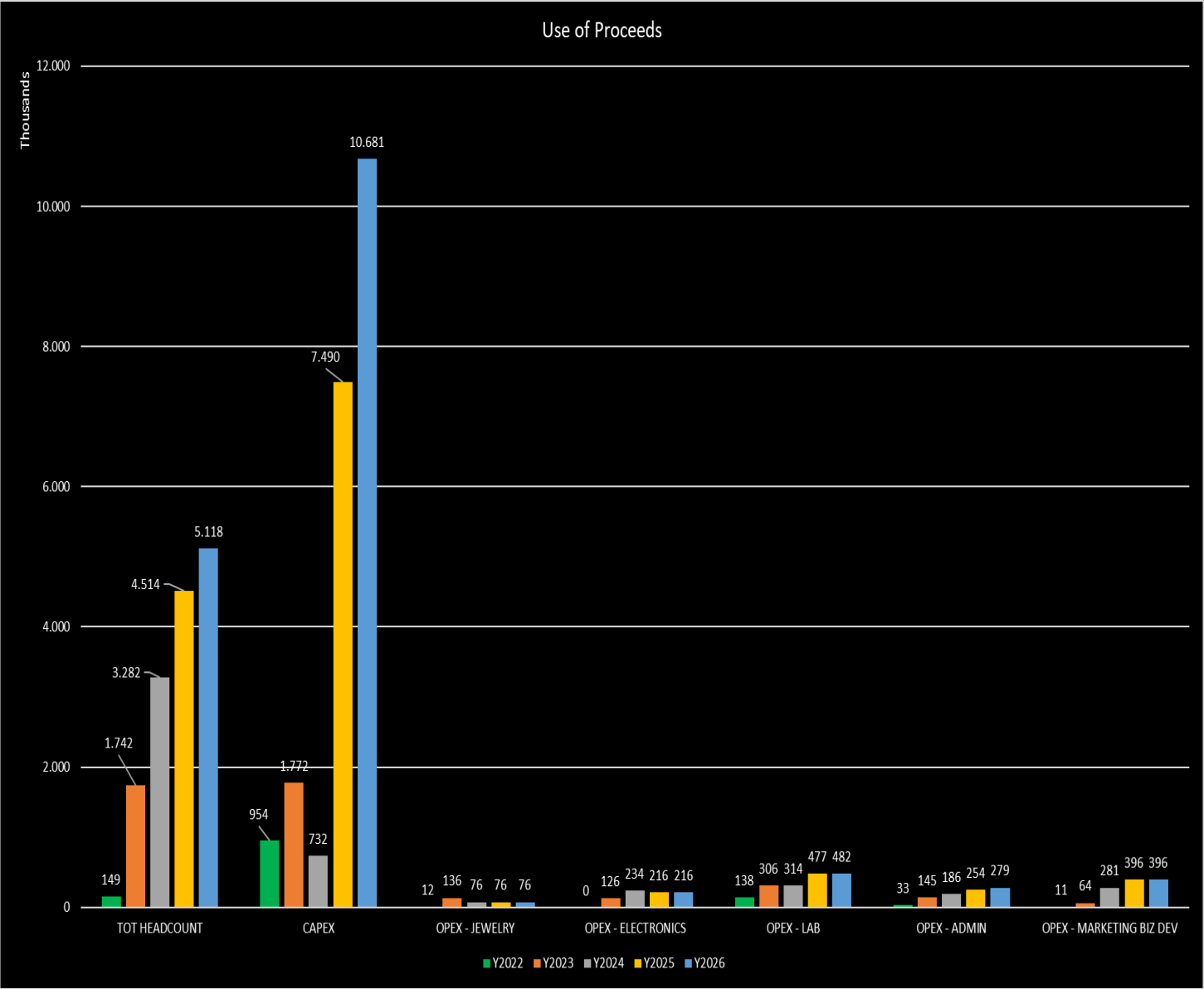


# FINANCIAL

## 2022 - 2026



FINANCIAL  
USE OF PROCEEDS



CHF

FTE

4

16

27

38

42

Y2022

Y2023

Y2024

Y2025

Y2026

TOT HEADCOUNT

148.551

1,741.872

3,281.792

4,514.071

5,117.887

MANAGEMENT

99.440

533.478

837.217

968.778

1,090.368

ENGINEERING & INNOVATION

38.772

530.530

1,155.406

1,647.325

2,096.596

OPERATIONS & LOGISTICS

0

186.106

376.088

782.729

782.729

GENERAL & ADMIN

10.339

87.883

127.948

267.604

300.561

INTERNS

0

104.038

284.974

332.198

332.198

MARKETING & BIZ DEV

0

299.837

500.159

1,030.870

1,030.870

CAPEX

954.000

1,771.500

731.500

7,490.000

10,681.000

CVD REACTOR MAXI-SIZE

429.000

1,089.000

462.000

6,600.000

0

CVD REACTOR MAXI-SIZE

0

3

3

13

13

CVD REACTOR MID-SIZE

195.000

300.000

105.000

300.000

600.000

CVD REACTOR MID-SIZE

0

1

2

3

5

PROUD OFFICE FURNITURE

20.000

61.000

20.000

30.000

0

PROUD OFFICE EQUIPMENT

10.000

30.000

0

30.000

0

PROUD LAB EQUIPMENT

61.500

100.000

0

100.000

0

PROUD LAB INSTALLATION

50.000

30.000

0

40.000

0

PROUD LAB ACCESS SECURITY

3.000

20.000

0

10.000

0

DIAMOND POLISHING MACHINE

15.000

0

15.000

150.000

0

DIAMOND POLISHING MACHINE

1

1

3

10

10

DIAMOND LASER CUT MACHINE

45.000

0

45.000

90.000

0

DIAMOND LASER CUT MACHINE

1

1

2

4

4

DIAMOND 3D SCANNER

31.000

0

31.000

0

31.000

DIAMOND 3D SCANNER

1

1

2

3

3

DIAMOND COLORING MACHINE

50.000

50.000

50.000

0

50.000

DIAMOND COLORING MACHINE

1

2

2

3

4

OPEX - JEWELRY

12.000

135.698

75.528

75.528

75.528

OPEX - ELECTRONICS

0

125.874

233.766

215.784

215.784

OPEX - LAB

138.363

306.407

314.400

476.500

481.570

OPEX - ADMIN

32.540

144.950

186.070

253.590

278.970

OPEX - MARKETING BIZ DEV

11.200

63.600

281.000

396.000

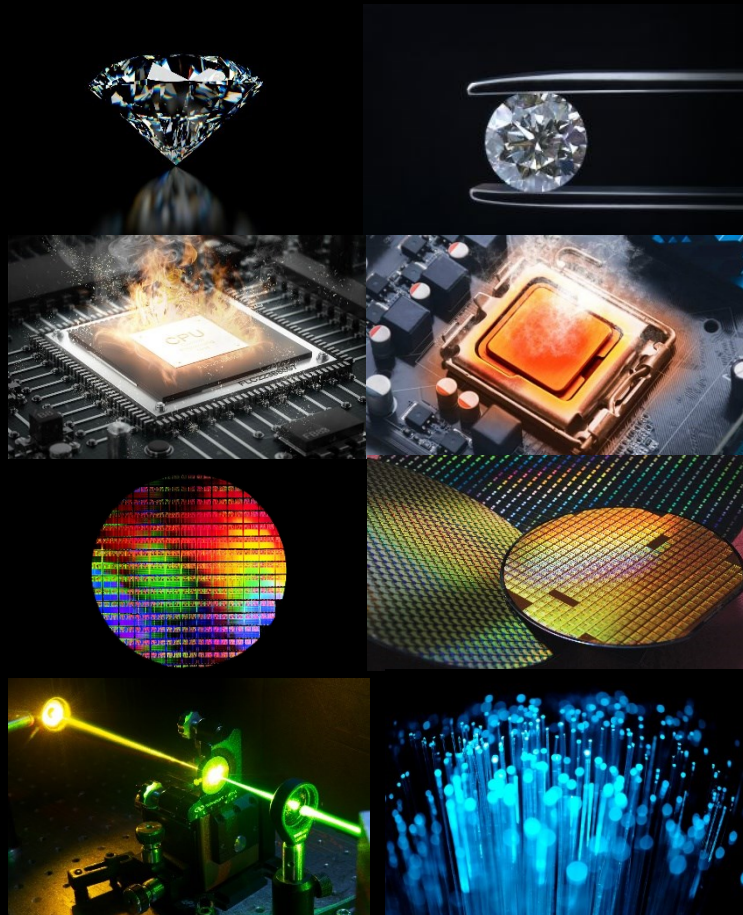
396.000



# NOVELTY + SCALABILITY + IMPACT

PROUD TECHNOLOGY

## THE INVESTMENT OPPORTUNITY



**NOVEL TECHNOLOGY & APPROACH :**  
ONGOING PATENT FILING WITH THE EPFL TTO. NO  
PAST RECORDS OF SUCCESSFUL DIRECT DIAMOND  
GROWTH ON GAN-ON-SI CHIP. COMPLETE NEW  
APPROACH OF PRODUCING A SEMICONDUCTORS  
DIAMOND ON GAN BI/TRI-WAFERS

**SCALABLE TECHNICAL SOLUTION :**  
MANUFACTURING SYSTEM AND PROCESS CAPABLE TO  
ADAPT EASILY TO INCREASED WORKLOAD OR MARKET  
DEMANDS. IT'S ABLE TO BENEFIT FROM ECONOMIES  
OF SCALE AND QUICKLY RAMP UP PRODUCTION.

**TARGETED IMPACT :** REDUCE ENVIRONMENT  
IMPACTS. REMOVE TODAY'S HEAT MANAGEMENT  
LIMITATIONS TO UNLOCK POWER ELECTRONICS  
POTENTIAL

PRE-SEED – MAY TO  
OCTOBER 2022

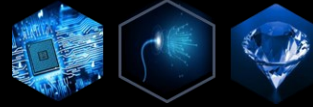


CHF 4,000,000  
FUNDING REQUIRED  
25% EQUITY IN  
THE COMPANY  
(SOFT CAP AT CHF 3,000,000)



CHF 150,000 – 400,000  
PER MONTH  
CASH EQUIVALENT FROM  
DIAMOND FARMING





## USE OF THE INITIAL FUNDING CHF 4,000,000



### OPERATIONAL EXPENDITURES – CHF 776,559

- OPEX - LUXURY –CHF 135,698
- OPEX - ELECTRONICS –CHF 125,874
- OPEX - LAB –CHF 306,407
- OPEX - ADMIN –CHF 144,950
- OPEX - BIZ –CHF 63,600

### TALENT RECRUITMENT (FT9) – CHF 1,119,040

- SENIOR CVD DIAMOND ENGINEER, EQUIPMENT & DESIGN
- SENIOR ELECTRICAL ENGINEER, THERMAL & HIGH-POWER DEVICES
- MICRO ENGINEER, CLEANROOM APPLICATIONS
- TECHNICIAN
- ADMINISTRATION ASSISTANT
- MARKETING AND SALES MANAGER

### PRODUCTION SET-UP – CHF 1,947,500

- PURCHASE OF EQUIPMENT – CHF 1,852,500
- INSTALLATION –CHF 95,000

# OPERATIONAL PLAN

## THE FIRST 15 MONTHS



2022

2023

JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MARCH	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
------	-----	-----	-----	-----	-----	-----	-----	-------	-----	-----	------	------	-----	------	-----

SUPPLYING FIRST B2B CUSTOMERS BY PRODUCING IN OUR STRATEGIC PARTNER SITE (FRANCE)

PRE-SEED FUNDING ROUND



PURCHASE OF MACHINERY



TRANSFORMATION SARL TO PROUD SA



TRANSFORMATION SITE (GENEVA FREE PORTS)

TALENT RECRUITMENT & ON-BOARDING – FTE 16



PRODUCTION SITE (VAUD)



FIRST SUPPLY OF PROUD LAB-GROWN  
DIAMONDS 100% MADE IN SWITZERLAND

SETTING OF A CUTTING & POLISHING PLATFORM



# PRODUCTION CAPACITY

WITH THE INITIAL INVESTMENT OF 4,000,000 CHF



- MONTHLY AVERAGE PRODUCTION PER "SMALL" REACTOR : 105 CT OF ROUGH DIAMOND
- MONTHLY AVERAGE PRODUCTION PER "BIG" REACTOR : 525 CT OF ROUGH DIAMOND
- PRODUCTION CAPACITY OF ROUGH DIAMOND FOR THE FIRST 3 REACTORS

1155 CT /MONTH => 13 860 CT/YEAR

CHF 1,089,229  
HUMAN RESOURCES  
FTE 11

CHF 1,880,500  
CVD REACTORS  
& MACHINES

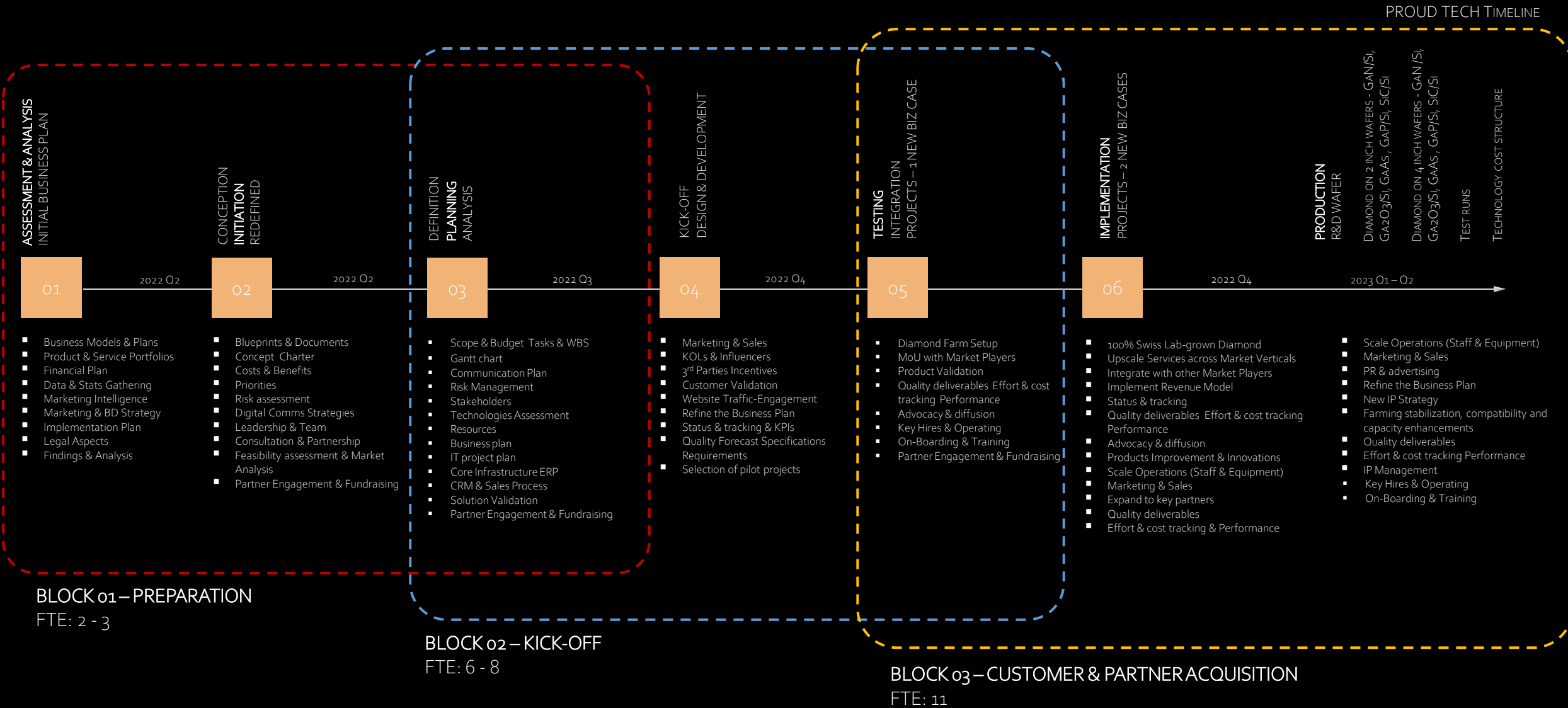
CHF 671,491  
OPERATING  
EXPENSES

CHF 3,641,220  
EXPENSES  
15 MONTHS

CHF 4,650,000  
GROSS REVENUES  
15 MONTHS

# IMPLEMENTATION

## THE FIRST 15 MONTHS



# WE GROW PROUD FOR YOU ALL OF US

SWISS LAB-GROWN DIAMOND

A DEEPTECH AND  
PURPOSE-DRIVEN COMPANY



THANK YOU

URE  
EAL  
UTSTANDING  
NIQUE  
IAMOND  
**PROUD**  
TECHNOLOGY

L.COLINA@PROUD-TECHNOLOGY.CH  
JB.DECORZENT@PROUD-TECHNOLOGY.CH

CONFIDENTIAL  
JUNE 2022