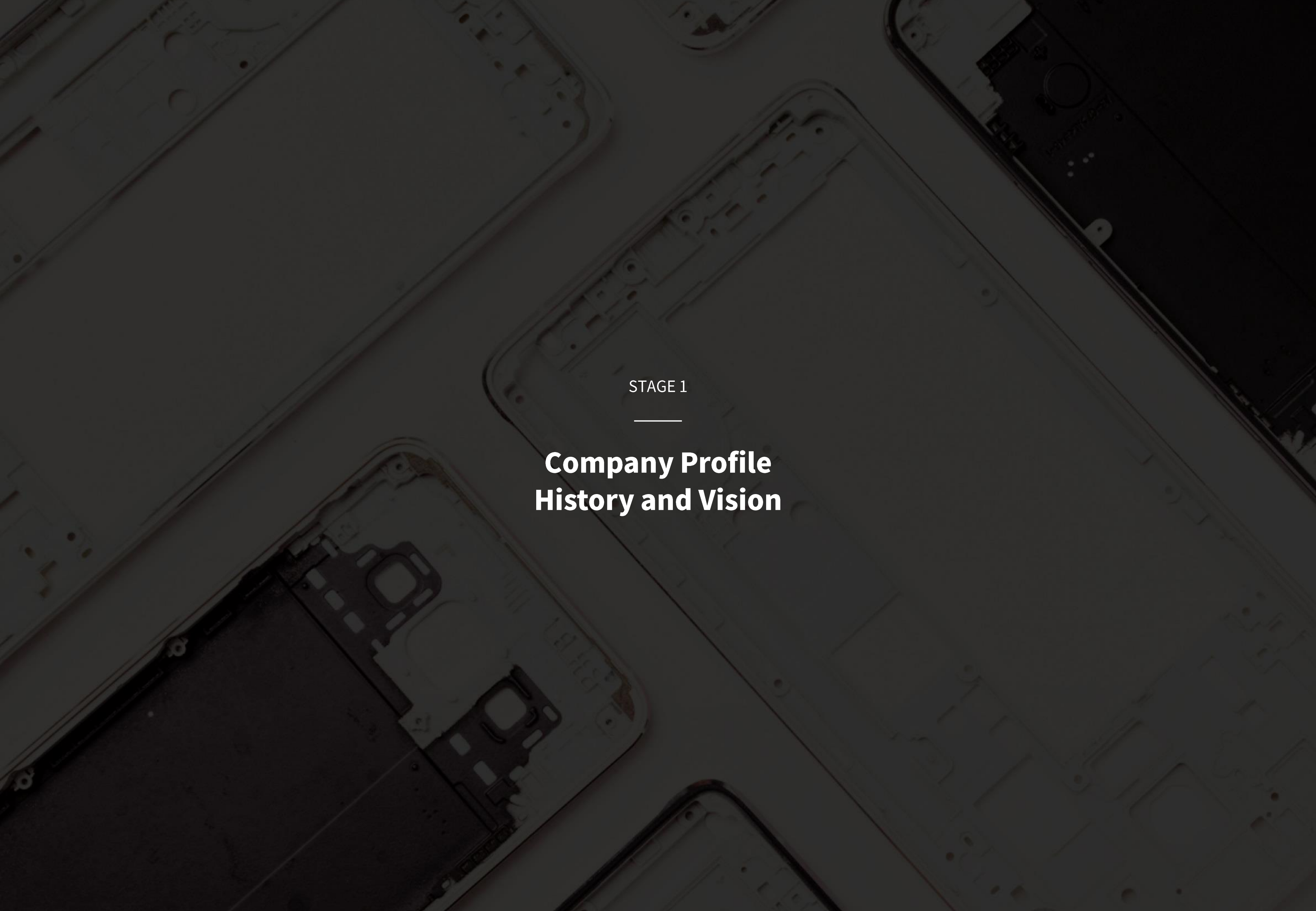
KHVATEC
Business Introduction
2016. 3 Quarter

KH VATEC®

www.khvatec.com

Contents



STAGE 1

Company Profile
History and Vision

Company Profile

Company Name	KHVATEC Co.,Ltd
CEO	K.H. Nam
Established	Nov. 1992
Capital Stock	KRW 10.0 bw(20,000,000 shares)
Business item	IT & wireless communication parts and modules
Specific area	Small precision Zn, Mg & Al miniature die-casting, Hinge Modules
Address(HQ)	53-12, 1gongdan-ro 10-gil, Gumi-si, Gyeongsangbuk-do, 39378, KOREA
	90, 1gongdan-ro 10-gil, Gumi-si, Gyeongsangbuk-do, 39379, KOREA
	128, 1gongdan-ro 6-gil, Gumi-si, Gyeongsangbuk-do, 39373, KOREA
Web site	www.khvatec.com

Manufacturing sites (China)	Tianjin('07) : Tianjin Airport Industrial Park, Tianjin, China
	Huizhou('12) : Huicheng District, Huizhou City, Guangdong, China

Sales Status (K-IFRS)

2015 Sales	KRW 737.9 bw
2014 Sales	KRW 590.0 bw
2013 Sales	KRW 824.2 bw

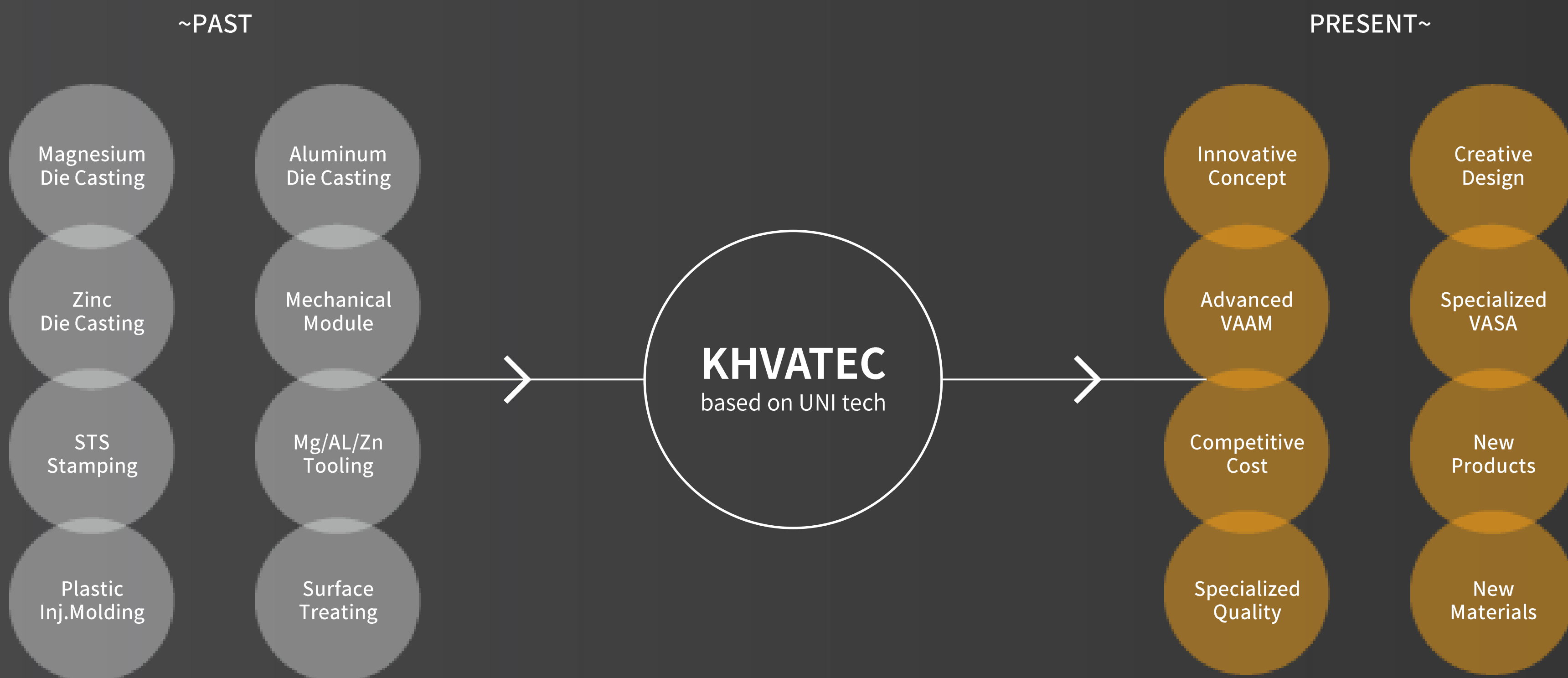
Employees (full-time, As of Sep.2016)

KOREA	360
CHINA	Tianjin 1,897 / Huizhou 1,543

History and Vision

Vision

- **Value-adding service > For Customer to lead the market**
- **IVC210*(Innovative Value Creator 210) is KHV's vision**



*IVC210: 210 means annually 10% growth and OPM 10% until 2020

* VAAM and VASA are KHV's unique business model

History and Vision

CSR

- **CSR Activities > Making people Happy**
- **CSR means Corporate Social Responsibility**

SHARE HOLDERS

Sustainable Growing
Trusted Relationship

KOREAN SOCIETIES

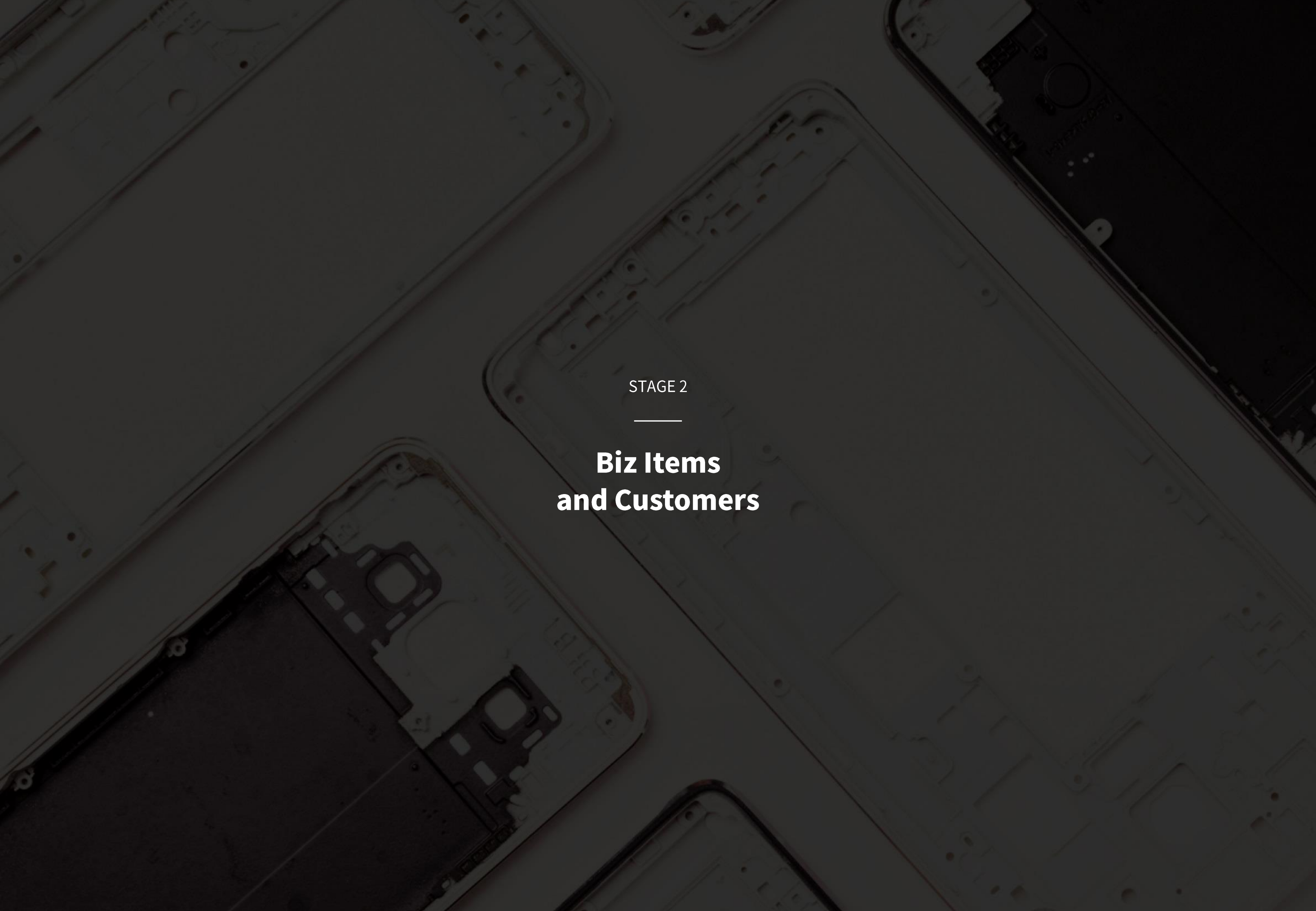
Aids & Art Sharing
Social Contribution

GLOBAL COMMUNITY

Working & Natural
Environment Improving

PEOPLE AT KHV

Welfare System
Ethical Management

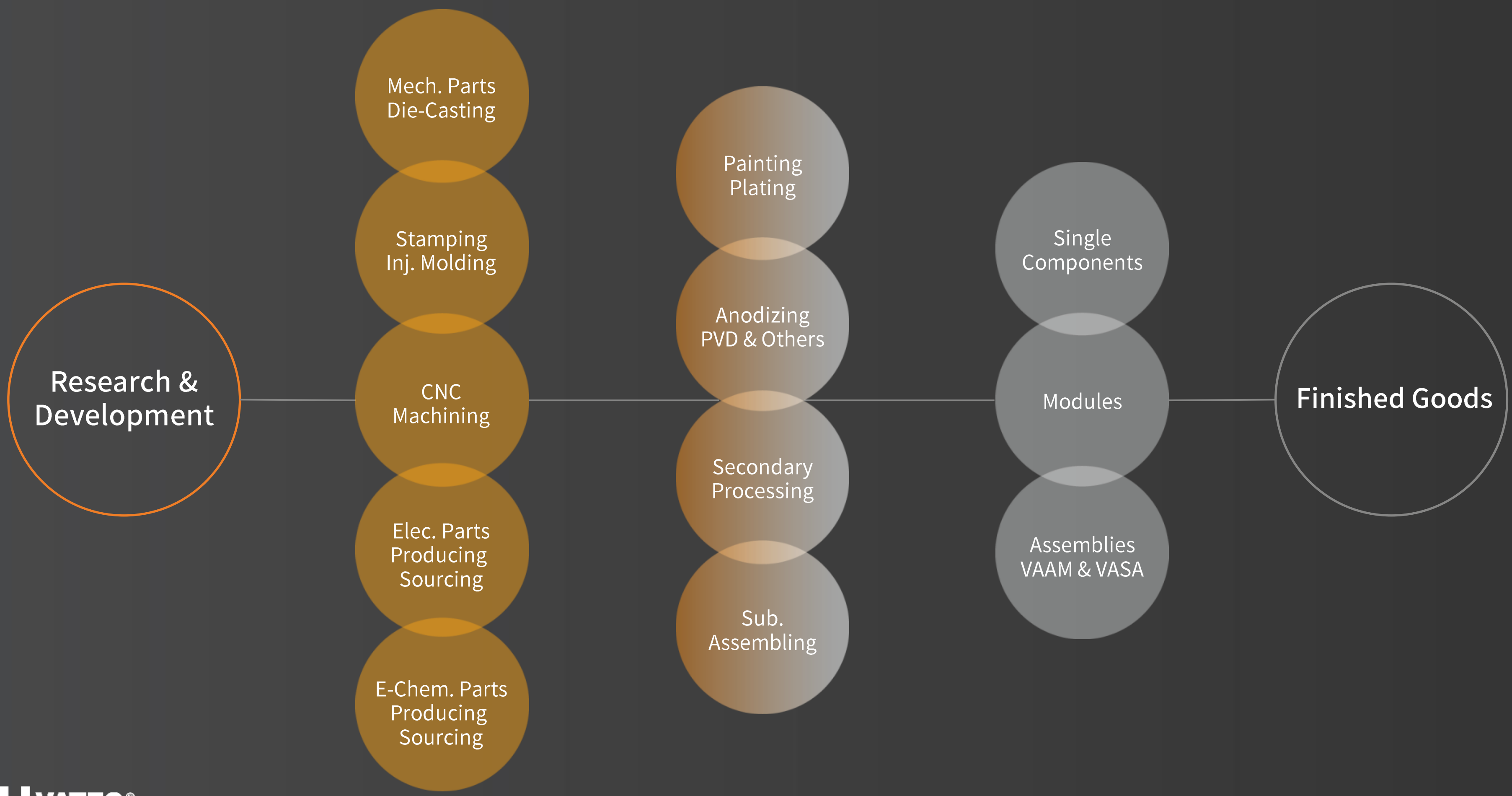


STAGE 2

Biz Items and Customers

Biz Items and Customers

MFG Process
Sophisticated Tech. & Control > High Quality & Value Products



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Biz Items and Customers

Biz Items
Single > Integrated Solution + New Value Products

`92 ~

- Zinc D/C Parts

`02 ~

- Other D/C Parts
- Hinge & Slide modules

`06 ~

- New Metal
- Non-metallic
- Mechanism modules
- VAAM*

`10 ~

- Vacuum D/C
- Advanced VAAM
- Specialized VASA
- FPCB, LED

`16 ~

- Cosmetic Metal
- Electrochemical
- Auto Parts & Modules
- New Products

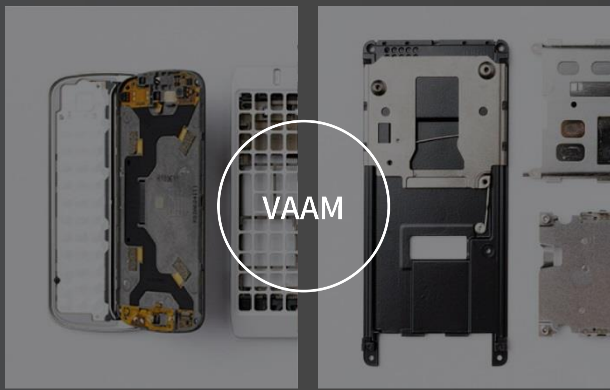
* VAAM and VASA are KHV's unique business model

Biz Items and Customers

Biz Items
VAAM & VASA ™

MECHANISM MODULE(A) Core Hinge or Slider + Subsidiary parts	**+ VAAM (B)** (A) + Key mat, FPCB, Connector…	**+ VASA (C)** (B) + Inner bracket + Electro mechanic part such as LCD, TSP, PCB, Ant., Camera, Speaker…

VASA



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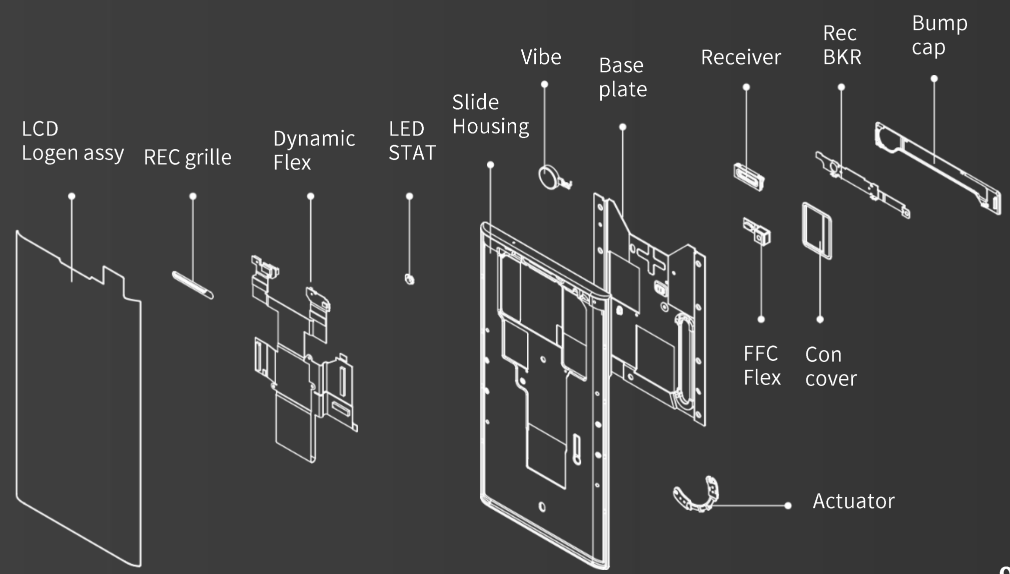


Biz Items and Customers

New Core
Enhancing the value of customer’s product

- New Materials & New Technology
- Cosmetic Metal Solution
- FPCB / Charging Module
- Flex.Bat. & M.Acc*

New Cores

in ICT Devices / AUTO Modules

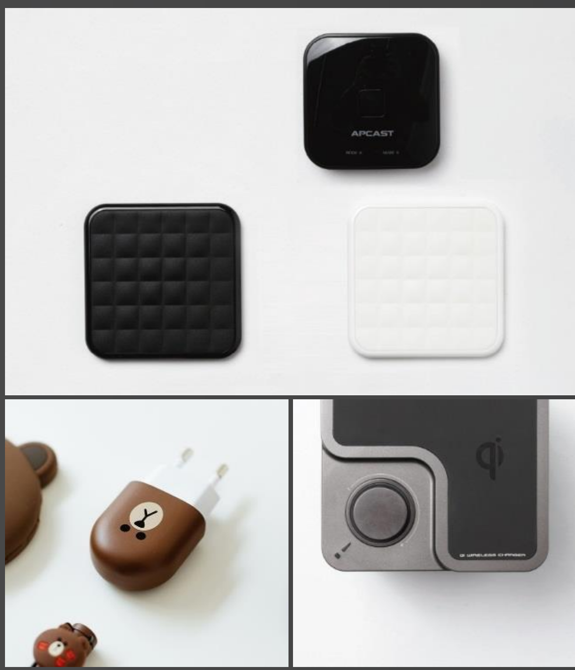
KH ELTEC® KH VATEC® KH LITEC®

- Light Material for W/R & New Technology
- Mechanical Module
- Electronic Module
- LED Lamp Module

* M.Acc : Mobile accessory

Biz Items and Customers

New Core
Enhancing the value of customer's product



Momentum
for
Stable Growing

New Cores

ICT industry > in ICT Devices / AUTO Modules < AUTO industry

KH ELTEC® KH VATEC® KH LITEC®

Biz Items and Customers

Customers
Local > Global Supplier

Past

`92~ **A/V & others**
- Zinc D/C Parts

`02~ **PC, PDA, Handset**
- Other D/C Parts
- Hinge & Slide modules

`06~ **Smartphone, Tablet**
- New Metal Parts
- Decoration, Non-metallic Parts
- Mechanism Modules
- VAAM

Present

`16~ **ICT, AUTO & Others**
- Cosmetic Metal Parts
- Electrochemical Parts
- Auto Parts & Modules
- New Customers

`10~ **Smart Devices**
- Vacuum D/C
- Advanced VAAM
- Specialized VASA
- FPCB, LED, Product

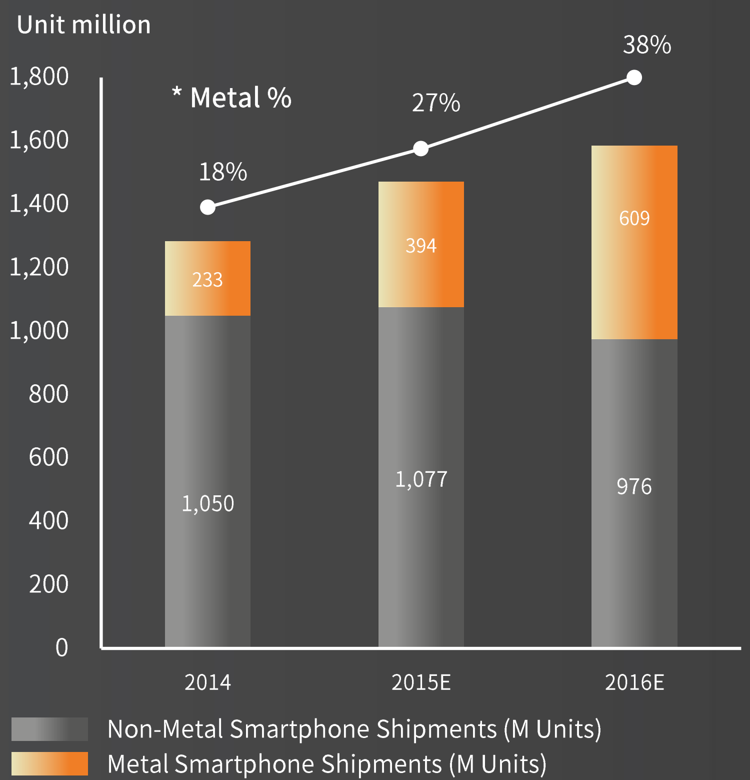
STAGE 3

Metal Case Trend
(Anodizable Die-Casting)

Metal Case Trend (Anodizable Die-Casting)

Expectations for Metal Casing adoption

Global Smartphone Shipments



- Source: Strategy Analytics, Goldman Sachs, Morgan Stanley, Deutsche Bank

SET Makers	Global M/S (1Q `15)	Metal Case 채택률 (%)		
		2014	2015E	2016E
Apple	17.7%	90%	92%	95%
Samsung	24.0%	5%	30%	65%
Huawei	5.0%	**15%**	**20%**	**25%**
Xiaomi	4.3%	10%	20%	40%
Lenovo	3.2%	1%	10%	20%
OPPO	2.4%	35%	50%	55%
Sony	2.3%	30%	30%	35%
HTC	1.2%	29%	30%	40%
Others	39.9%	0%	3%	7%
Total	100%	18%	27%	38%
Apple 제외	82.3%	5%	16%	30%

* Apple, Full CNC Metal Unibody 지속 채용 전망
- 차기 모델 iPhone 6S, 고강도 Al 적용 -> 지속 채용 예정

* Samsung, Alpha, Note 4, A시리즈를 시작으로 Metal Casing 채용 확대
- 프리미엄 ~ 저가까지 전방위 확대 예정

* 중화권 SET사, 제품 차별화를 위해 Metal Casing 채용 확대 중
- (특히 OPPO의 경우 '16년 Metal Casing 채택률 55% 예상)

* Sony/HTC, '13/'10년부터 Al Unibody 채택
- Metal Casing 적용 모델 확대 지속 중

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Metal Case Trend (Anodizable Die-Casting)

Comparison of Metal Casing manufacturing method

	장점	단점	평균 ASP		KHV 기술활용 방안
			Ring	Unibody	
Full CNC	* Anodizing 가능으로 뛰어난 심미적 효과	* 긴 제작 시간 (ST 3,000 ~5,000초: 83분) * 높은 제조 원가/투자비용	$18 ~$20	$25 ~$30	
D/C + 도장 (ALP)	* 캐스팅 기반 높은 생산성 및 CNC 대비 40 ~50% 낮은 ASP 가능 * 삼성,A/J시리즈 레퍼런스 (KHV 품질/수율 탁월) * 아노다이징과 외관 유사	* 메탈 질감 저조 * 메탈 질감 구현을 위한 다이아컷 등 추가 공정 필요	Full CNC 대비50%↓	Full CNC 대비 40%↓	* 중저가 모델 공략에 활용
ADC1) D/C + Anodizing	* Anodizing 표면처리로 뛰어난 심미적 효과, 캐스팅 기반 높은 생산성 및 CNC 대비 원가경쟁력 탁월	* Full CNC 소재 대비 강도 다소 약함	**Full CNC 대비 30~40%↓**	**30~40% (개발中) ('16년 하반기)**	*** 세계 최초 상반기 내 양산 진행 예정** *** Global 고객사 대상 양산 검증中**
Stamping + Anodizing	* Full CNC대비 ST 감소 -CNC대비 가격 경쟁력 확보	* 표면 밀도 차이에 의한 Anodizing 효과 반감 * 대단위 CNC CAPA필요 (ST 30분 내외)	Full CNC 대비 20~30% ↓	불가능	

Metal Case Trend (Anodizable Die-Casting)

ADC
Real anodized surface AL Die-Casting

1. Combine Die-Casting productivity with anodizing look for AL6061(Full CNC 소재)
2. Competitive Cost : Reduced CNC Process & C/T (80% 절감: 50분 -> 10분)
3. Excellent finish : Elegant Surface & Guaranteed durability(아이폰 수준의 외관 확보)
4. Color : No limit (except for white)

Die-Casting (KA-07) — CNC — Strengthening — NMT Insert-Molding — Sanding Buffing — Anodizing

※ Option: Dia-Cut

Material : KA-07*

*KA-07 is KHV's proprietary developed material and applied for patent

Material		AL6061	ALDC12	KA-07
Property	Density (g/cc)	2.7	2.8	2.7
	YTS (MPa)	276	165	200
	Elongation(%)	17	3.5	6.2

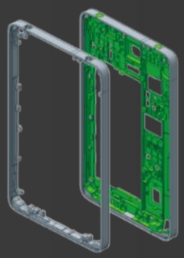
※ YTS: 항복강도

Type

01.

Ring
(KA-07)

02.



Insert Molding
(PPS)

03.

Mid Frame
(PC)

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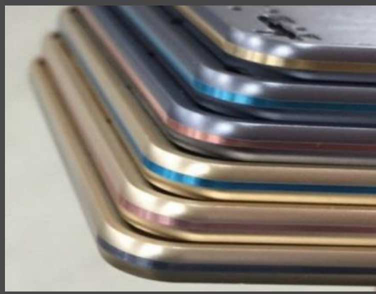
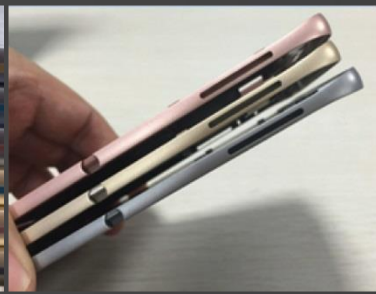
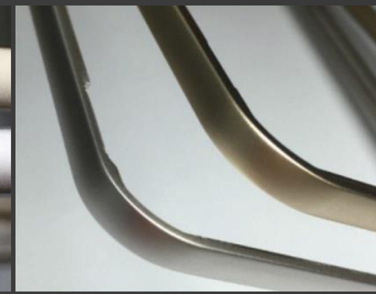
Metal Case Trend (Anodizable Die-Casting)

Patent




1.

소재

강도가 향상된 아노다이징
알루미늄 합금 (인체유해 원소 제거)

2.

강도 향상

금속 소재 강도 향상
- 소재의 소성변형을 통한 강도 향상

3.

제조 방법

스마트폰 금속 케이스 제조
- ADC 제조 관련 공법 특허

4.

주조방법

유동형태를 제한하여 균일조직 생성

5.

금형

가열을 통한 금형과 용탕 온도 차 ↓

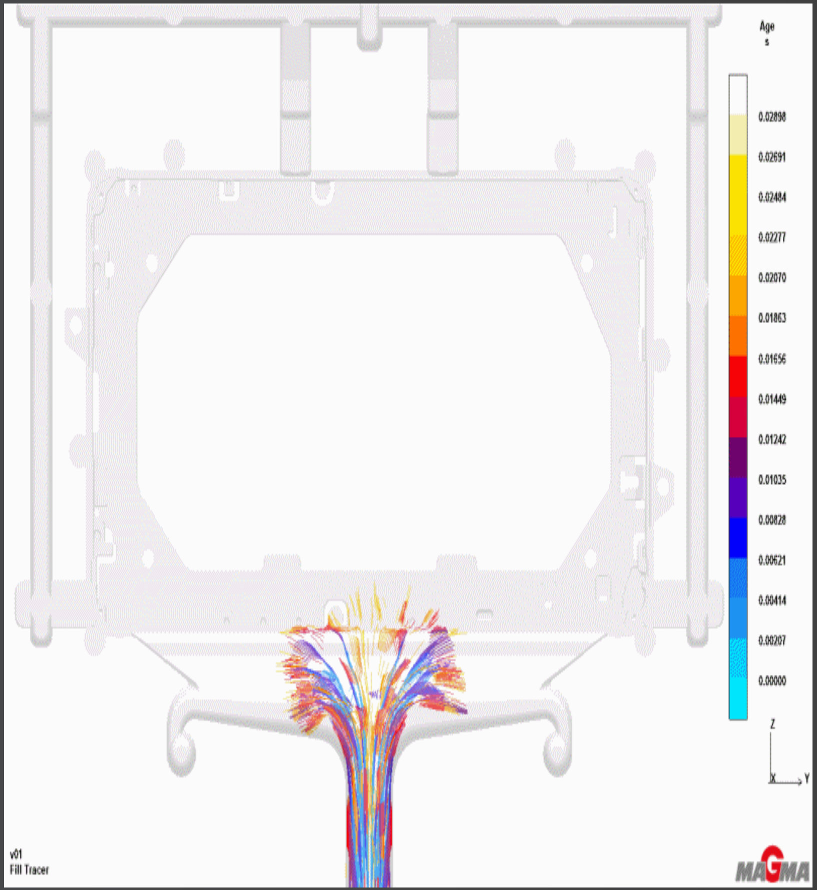
6-7.

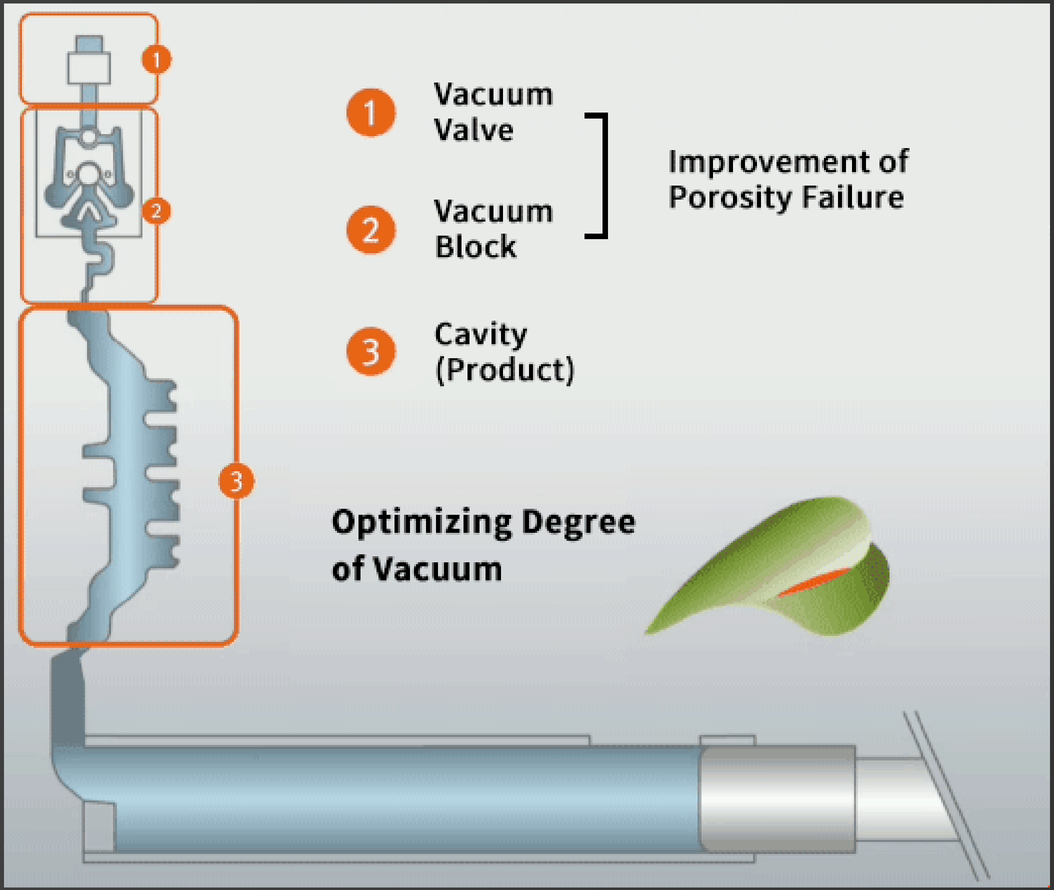
캐스팅

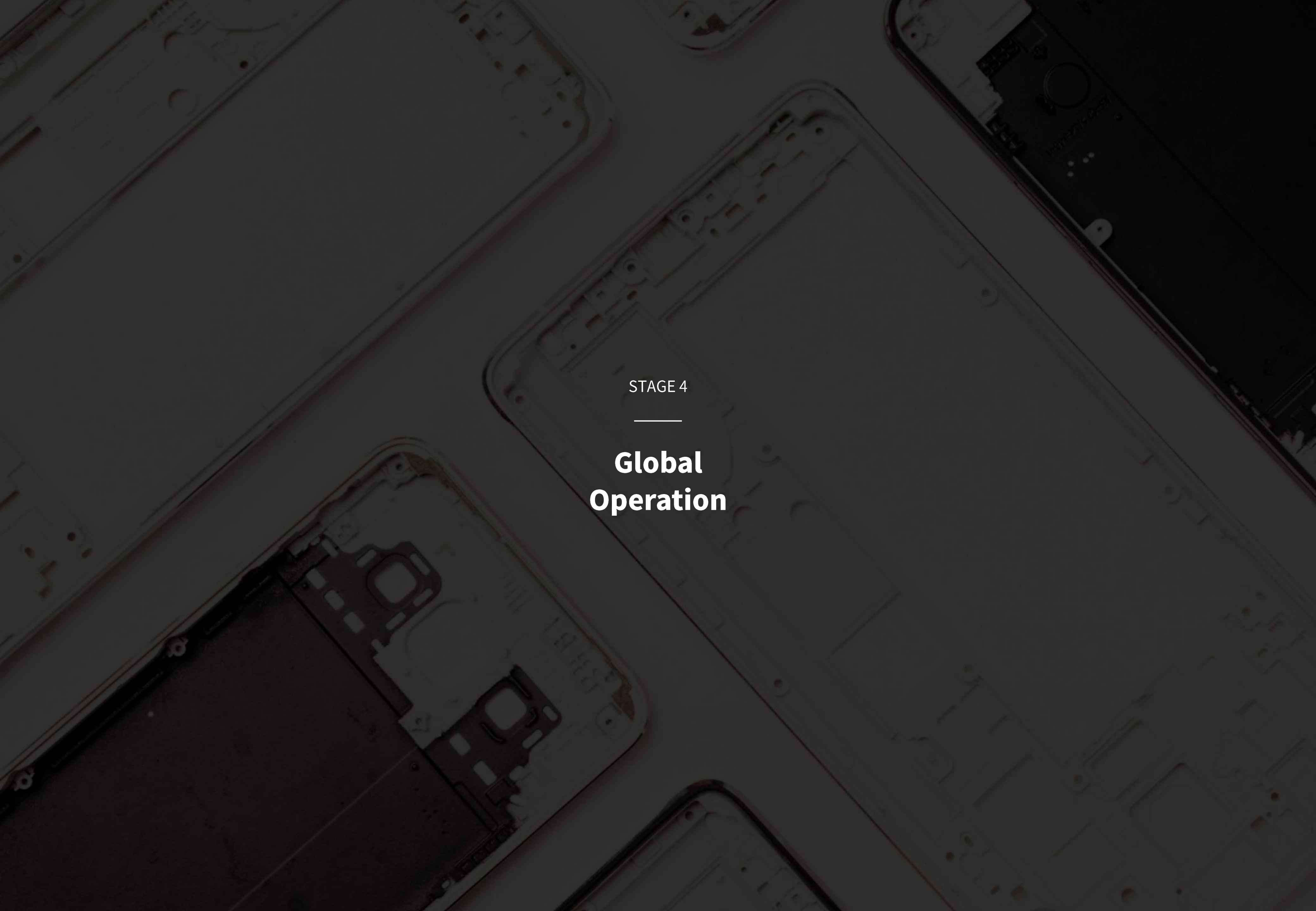
윤활제 : 금형으로부터 제품의 원활한 분리
냉각방법 : 냉각수를 이용한 주물의 냉각

Metal Case Trend (Anodizable Die-Casting)

Vacuum Die-Casting







STAGE 4

Global Operation

Global Operation

Global Presence

- Local > Worldwide Player
- ESI means Early Supplier Involving for co-R&D

KHVATEC GROUP

CEO/Chairman

KH Nam

Seoul Office

JS KIM, President
DJ KIM, CFO
SK PARK, CTO

Gumi Headquarter

JH KIM, COO
DK KIM, CMO

KHVATEC TJ

SK MIN, SVP

KHVATEC HJ

SH LEE, SVP

KHELTEC

BK PARK, President

KHLITEC

CH LEE, SVP

Global Operation

Globalization
Globalizing > Characterizing by Region's Infrastructure

KHV & KHE & KHL

- Premium and New Products
- R&D of New Concept
- Value Networking with High Tech Companies
- Technology Leadership

-> Value Oriented

R&D Collaboration
with customers

Best Value Products

Korea & ESI Sites

Tech. Transfer

—

"Quality First" at both places

Best Cost Products

China

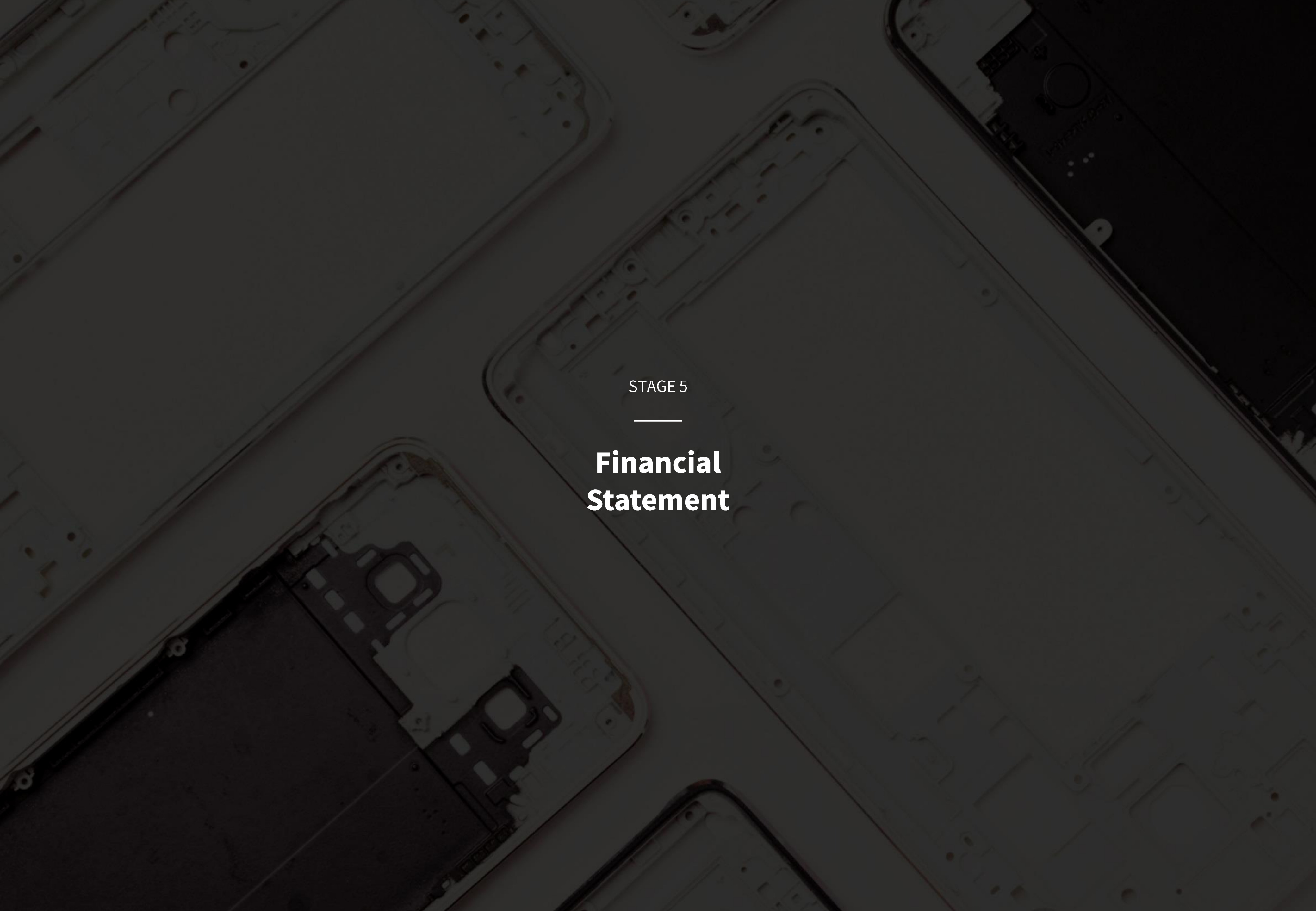
KHV TJ & HZ

- Entry & High Volume Products
- MFG Tech. Innovation
- Organizing Value Network with local suppliers and collocated Korean suppliers

-> Value Oriented

MFG Tech. Cooperation
with suppliers

KHV works together with the Core Value



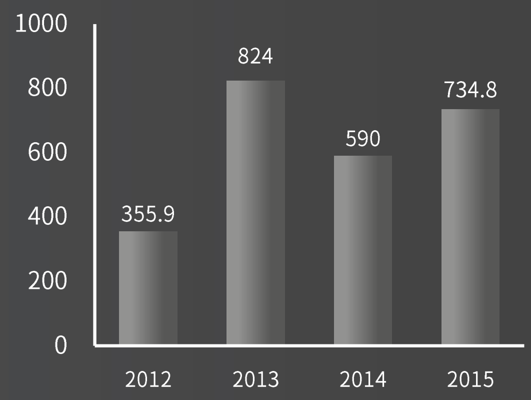
STAGE 5

Financial Statement

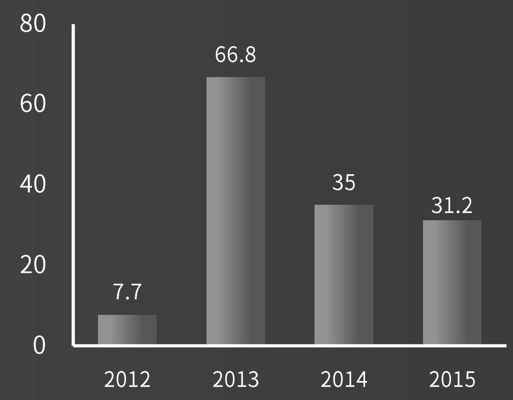
Financial Statement

Sales / OP / NI / Inv

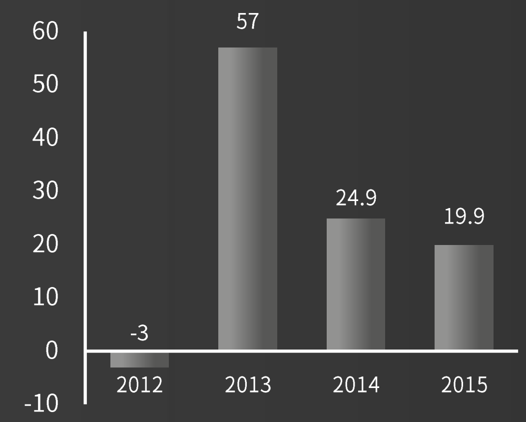
SALES



O/P



N/I



※ Consolidated

Prime Investment

(bw)	Items	2011	2012	2013	2014	2015
Investment	Estate & Building	7.5	-	1.7	0.1	0.2
	Machinery	9.3	35	0.9	2.3	4.1
	Tooling	0.5	1.3	0.9	1.3	1.4
	R & D	13.1	12	12.9	10.1	15.6
	Construction in progress	52.7	-	25	31.5	58
	Total	83.1	48.3	41.4	45.3	79.3

Financial Statement

Balance sheet

B/S (KRW, billion)	FY14	FY15	Remark
Current assets	**361.9**	**197.8**	**유동자산**
Quick assets(Trade Receivables)	288.9(119.2)	169.6(88.3)	당좌자산(매출채권)
Inventories	73	28	재고자산
Fixed assets	**214.4**	**257.6**	**비유동자산**
Investment			투자자산
Tangible assets	200.1	236.8	유형자산
Intangible assets	8	11.4	무형자산
Total assets	**576.3**	**455.4**	**자산총계**
Current liability(Trade Payables)	**292.2**	**167.2**	**유동부채**(매입채무)
Short-term borrowings	71	69.2	단기차입금
Long term liability	**17.7**	**6.3**	**비유동부채**
Long-term borrowings	13.0	3.9	장기차입금
Total liability	**309.9**	**173.5**	**부채총계**
Capital stock(shares)	8.0(16m)	10(20m)	자본금(주식수,백만주)
(treasury stock)	480K	484K	자사주(천주)
Capital surplus	27.8	25.8	자본잉여금
Retained earnings	231.3	246.9	이익잉여금
Capital adjustment	7.4	7.5	자본조정
Total shareholders' equity	**266.4**	**281.8**	**자본총계**
Total liabilities & Shareholders' equity	**576.3**	**455.4**	**부채와 자본 총계**

※ Based on K-IFRS / Consolidated

Financial Statement

Profit & Loss

P/L (KRW, billion)	FY14		FY15		Remark
Sales revenue	**590**		**737.9**		**매출액**
Costs of Goods Sold	**514.6**	**87.2%**	**669.6**	**90.7 %**	**매출원가**
Gross profit	**75.4**	**12.8 %**	**68.4**	**9.3 %**	**매출총이익**
Selling & administrative cost	**40.4**	**6.8 %**	**37.2**	**5.0 %**	**판관비**
Operating income (loss)	**35**	**5.9 %**	**31.2**	**4.2 %**	**영업이익(손실)**
Non-operating revenues	**12**	**2.0 %**	**14.7**	**2.0 %**	**영업외수익**
Interest income	3.7	**0.6 %**	1.5	0.2 %	이자수익
Non-operating expenses	**11**	1.9 %	**14.5**	**2.0 %**	**영업외비용**
Interest expenses	3.5	**0.6 %**	3.5	0.5 %	이자비용
Ordinary income (loss)	**35.9**	6.1 %	**31.6**	**4.3 %**	**세전이익(손실)**
Income tax	11	**1.9 %**	11.6	1.6 %	법인세비용
Net income	**24.9**	**7.0 %**	**19.9**	**2.7 %**	**당기순이익**
EPS (won)	**1,687**		**1,069**		**주당순이익**

※ Based on K-IFRS / Consolidated

KH VATEC®

Financial Statement

2016(K-IFRS), KRW, billion

B/S	`16.3Q	`16.2Q	Var
Total assets	400	419	-19.1
Current assets	170	177	-7.1
Fixed assets	230	243	-12.1
Total liability	148	155	-7.2
Short-term borrowings	56	79	-23.7
Total shareholders' equity	252	264	-12.0

※ Short-term borrowings : Included Open Account

C/F	`16.2Q	`16.1Q	Var
Operations	-14.6	24.5	-39.1
Investment	-11.4	-20.0	8.7
Financing	2.7	-2.5	5.1
Change	-0.2	-0.8	0.6
Beginning Bal.	79.4	78.2	1.2
Ending Bal.	55.9	79.4	-23.5

P/L	`16 .3Q	`16 .2Q	QoQ	`15.3Q	YoY	`15yr	`16. 3Q(YTD)
Sales revenue	96.6	84.8	14.0%	189.3	-49.0%	737.9	285.6
Gross profit	4.3	-0.7	Turn around	22.9	-81.4	68.4	9.3
Operating income	-2.5	-8.3	Deficit reduce	11.1	Deficit conversion	31.2	-12.5
(%)	-2.6%	-9.8%	-	5.9%	-	4.2%	-4.4%
Ordinary income	-5.8	-9.2	Deficit reduce	11.9	Deficit conversion	31.6	-17.3
Net income	-5.2	-7.8	Deficit reduce	6.3	Deficit conversion	19.9	-15.6
EPS(won)	-263	-396	Deficit reduce	333	Deficit conversion	1,069	-789

※ Consolidated

Financial Statement

Key shareholders

Name	`16.09	(%)	`16.06	(%)	`16. 03	(%)	remark
Kwang Hee Nam	3,145,537	15.73%	3,145,537	15.73%	3,145,537	15.73%	CEO
Jong Sook Kim	1,897,263	9.49%	1,897,263	9.49%	1,897,263	9.49%	
Jong Sei KIM	563,463	2.82%	563,463	2.82%	563,463	2.82%	
Sook Hee Han	380,000	1.90%	380,000	1.90%	481,883	2.41%	
Sum(affiliate person)	5,986,263	29.93%	5,986,263	29.93%	6,088,146	30.44%	
Foreigner	1,144,000	5.72%	950,000	4.75%	1,872,000	9.36%	
Others	12,119,737	60.60%	12,578,870	62.89%	11,554,987	57.77%	
Treasury stock	750,000	3.75%	484,867	2.42%	484,867	2.42%	
Total	20,000,000	100.00%	20,000,000	100.00%	20,000,000	100.00%	

Thank you