



Cash Management Solutions – Carlos Massa



D1



D3



D11



D12



D10s with sidecars & Pedestals



D51/52



D180 & D300



Coin & Note Recycler



TCR



Cash Management Portfolio



Retail Recycler



TCR



HOTS CONFIDENTIAL

HOTS Company Introduction

May 9th 2017

Global Business Group
Hitachi-Omron Terminal Solutions, Corp.



Agenda

1. **Company Profile**
2. **Core Competence**
3. **HOTS Business Result**



Europe

- Revenues: **951.1** billion yen
- Number of companies: **194**
- Number of employees: **20** thousand

North America

- Revenues: **1,280.3** billion yen
- Number of companies: **112**
- Number of employees: **21** thousand

China

- Revenues: **1,055.5** billion yen
- Number of companies: **180**
- Number of employees: **47** thousand

Japan

- Revenues: **5,231.5** billion yen
- Number of companies: **262**
- Number of employees: **187** thousand

Asia (incl. China)

- Revenues: **2,112.3** billion yen
- Number of companies: **399**
- Number of employees: **95** thousand

Other Areas

- Revenues: **459.0** billion yen
- Number of companies: **89**
- Number of employees: **10** thousand

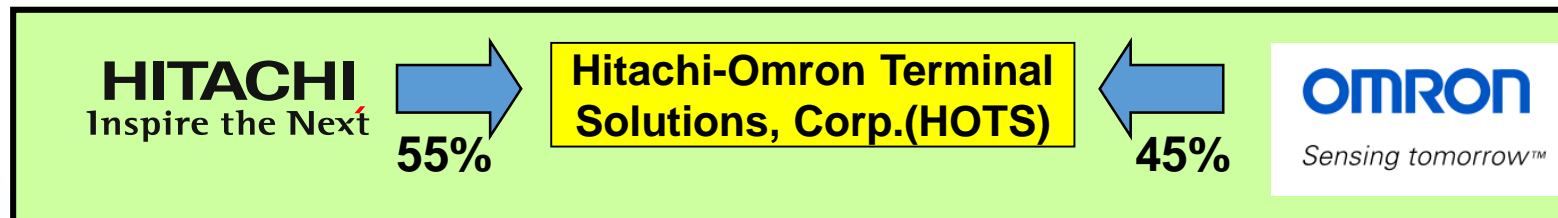
Japan	Revenues: 5,231.5 billion yen/Number of companies: 262 /Number of employees: 187 thousand
Outside Japan	Revenues: 4,802.7 billion yen/Number of companies: 794 /Number of employees: 147 thousand
Total	Revenues: 10,034.3 billion yen/ Number of companies: 1,056 / Number of employees: 335000



1-1 Company Profile “HOTS”

General Information

Company Name	Hitachi-Omron Terminal Solutions, Corp. (HOTS)
Established	October 1, 2004 JV of Hitachi & Omron
Core Business	Sales, marketing, development, engineering, manufacturing, and services of ATM and modules for banking and retail

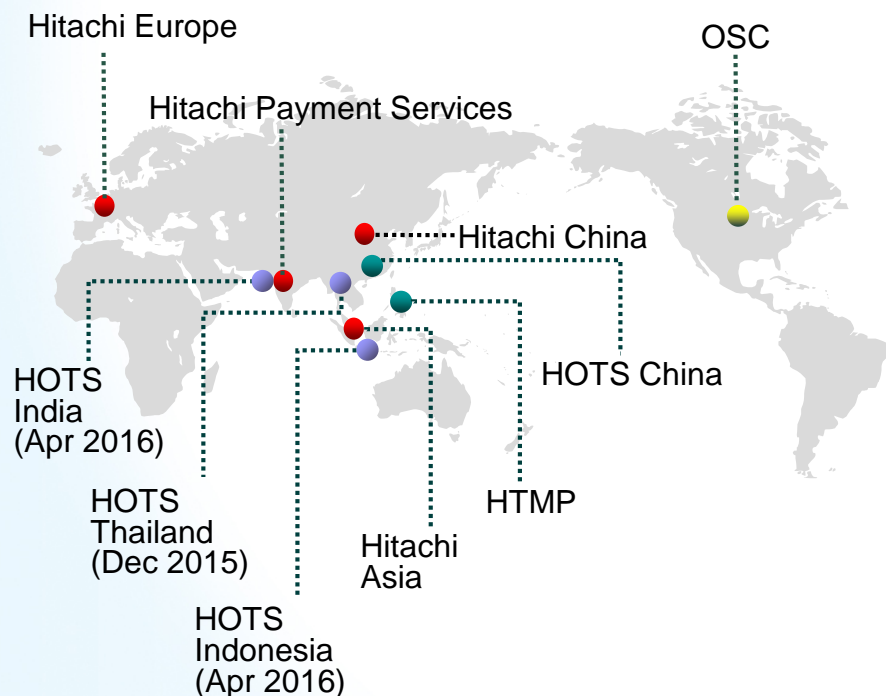


1-2 Company Profile

Company Network

■ Overseas

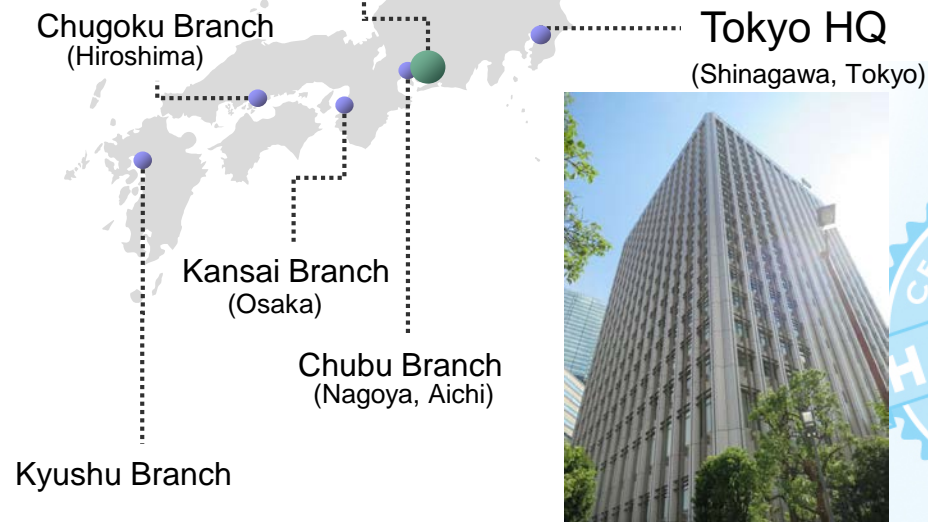
- Factory
- HOTS office
- Hitachi office
- Sales office



■ Japan



Asahi Works
(Owari Asahi, Aichi)



Agenda

1. **Company Profile**
2. **Core Competence**
3. **HOTS Business Result**



The Law of Unintended Consequences !



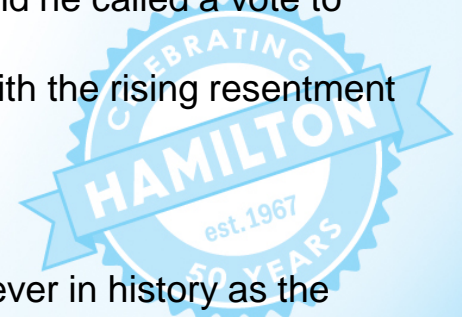
Remember this man?



Heard about BREXIT?

...otherwise known as the tale of David Cameron's, ex Prime Minister, UK, journey from hero to zero...

- ❖ In 2014 the Scottish National Party were making a lot of noise about separating Scotland from the United Kingdom (England, Wales, Scotland, Northern Ireland)
- ❖ Of ~70M population in the UK about 5M are Scottish so David Cameron decided to risk all by allowing the Scottish to vote if they wanted to leave or remain in the UK.
- ❖ The campaign was divisive and looked for a while that the Scottish Nationalists had won and Cameron would be the man responsible for breaking up the UK.
- ❖ But then by overwhelming majority the Scottish decided to stay (not surprising as they are the most subsidised country in the UK)
- ❖ Cameron became a hero to his party (Conservatives) as the man who faced down the Scottish Nationalists
- ❖ In 2015 the country had a general election ...against all expectations David Cameron's Conservative party won a majority to govern the UK
- ❖ Within his party the right wing element had long campaigned for UK to leave the European and were getting more and more disruptive
- ❖ Cameron was confident he could repeat the trick as most business people wanted to stay in Europe and he called a vote to silence the leavers as he was sure he could repeat the Scottish trick...so called Brexit vote
- ❖ But the law of unexpected consequences caught up with him as the Brexit vote became confused with the rising resentment against uncontrolled immigration to the UK caused by the wars in the Middle East
- ❖David Cameron lost the vote as the country voted 52/48% for BREXIT
- ❖David Cameron resigned and is now known as the man who caused the UK to leave the EU, forever in history as the man who split UK for Europe



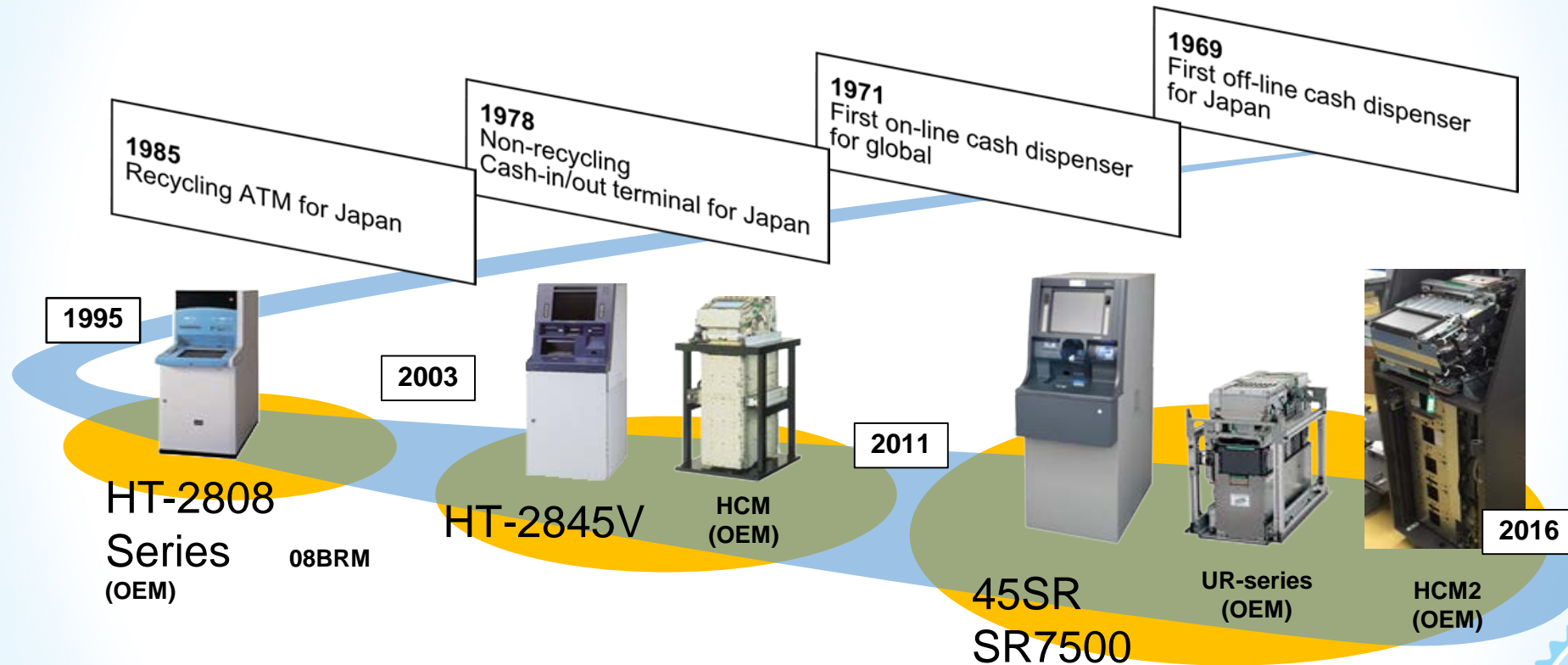
So what is the Law of Unexpected Consequence

Simply put it's this;

- Take a risk when you are not certain of the outcome and you risk more than just the business!
- In banking and retail banknote recycling only 3 things count
 - Reliability
 - Reliability
 - Reliability
- HOTS is the global market leader in banknote recycling technology. Reliability and performance is in the Japanese DNA !



History of Hitachi/HOTS ATMs



- More than 45 years of experiences in the field of cash handling.
- No.1 share in the recent 3-generations (08-series, HCM and UR-series)
- More than 500 patent applications related to cash handling / recycling.





Sensing

Sensing Technology

Validation technology of experience & Know-How

Bank note / Coin Auto
Validation

High Resolution Image Process /
User trace / Text Recognition /
Retinal vilification / IC Validation



Handling

Handling Technology

Accurate & Speedy Handling & Processing technology

Note / Card / Passbook
Handling & processing

Handling / Mag Stripe Processing /
Card Printing / Contactless
IC Processing / Embosser technology



Security

Security Technology

Authentication Technology of High accurate security

High Reliability
Biometric

Finger Vein Registration /
Authentication Application

Agenda

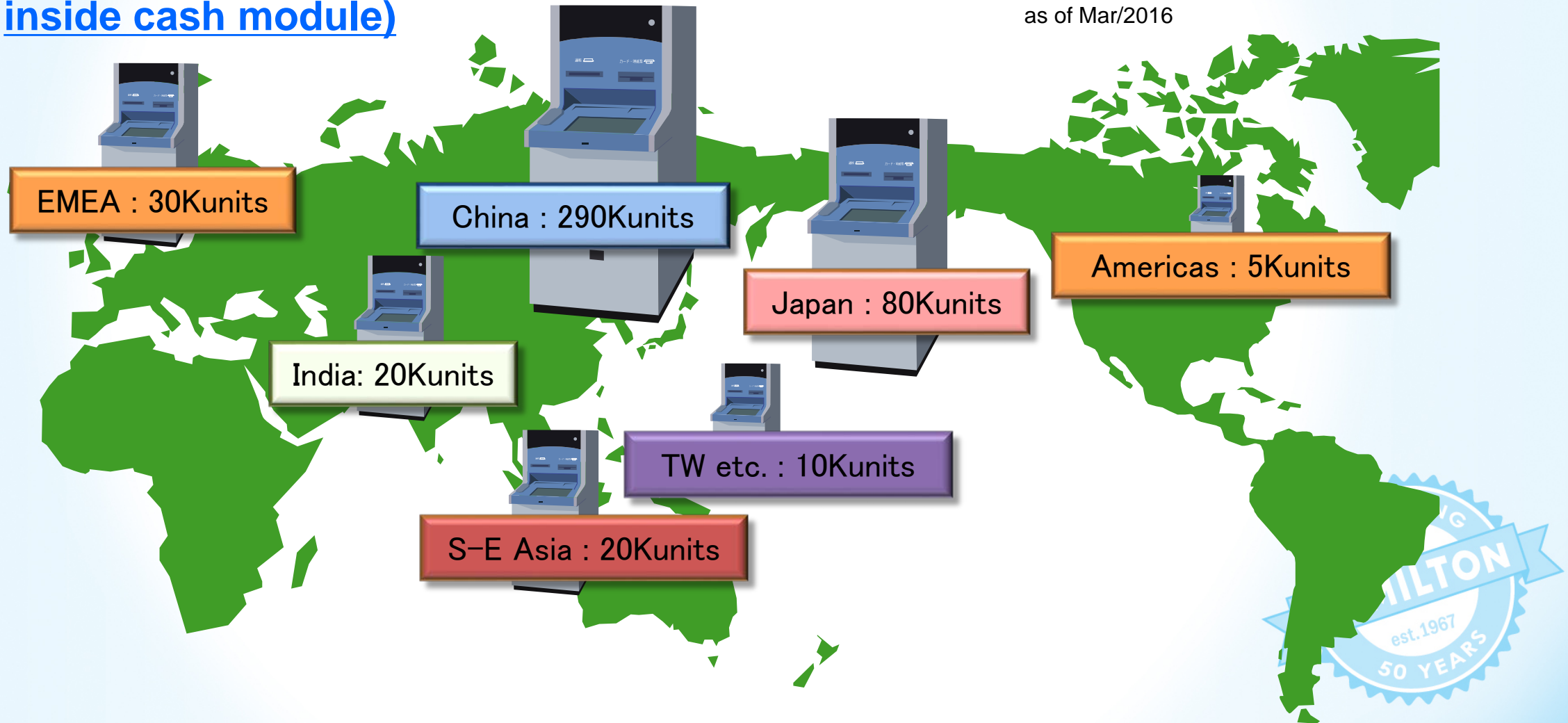
1. Company Profile
2. Core Competence
3. **HOTS Business Result**



3 HOTS Business Result

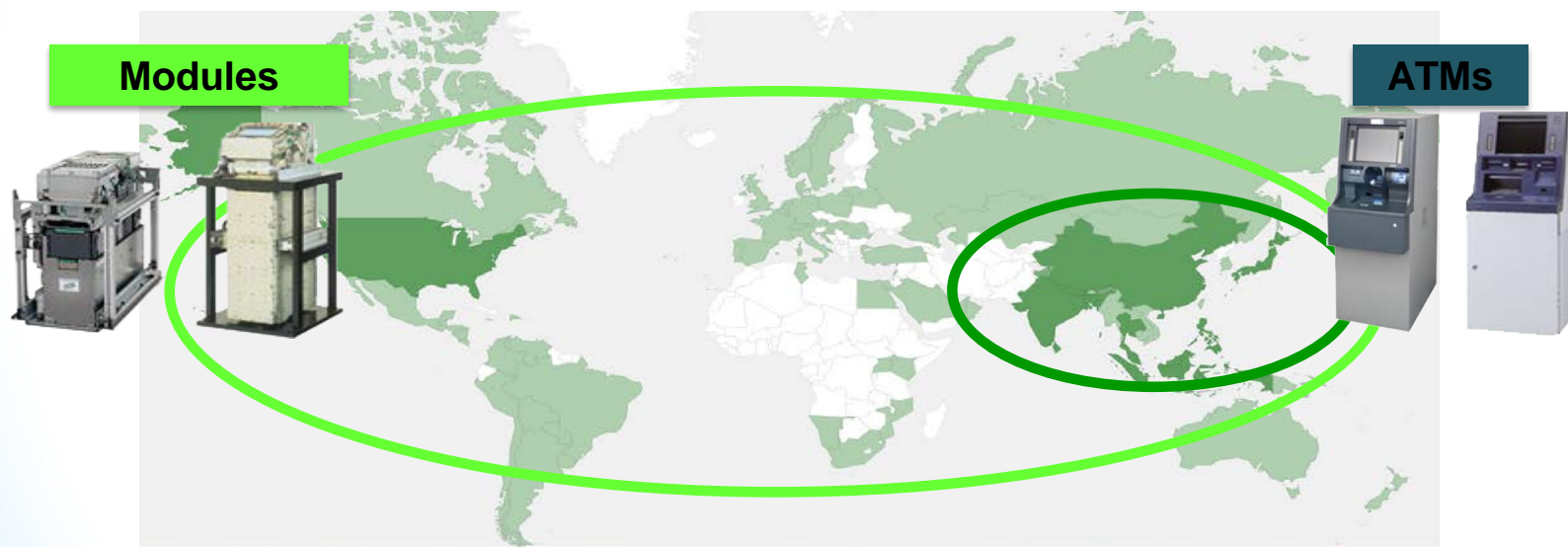
Installation Volume by Region (Recycling banknote ATM and inside cash module)

as of Mar/2016



HOTS Worldwide Installations

- Deploying more than 400K ATMs & cash modules for 60 countries by using the common UR/HCM core engines.
 - ATM: Approx. 210K ATMs for 16 countries including Japan (41K ATMs).
 - OEM: Approx. 190K HCMs/URs for more than 60 countries.
- Concentrating the resources to improve those core engines, based on the worldwide experiences of production, development and maintenance.



HOTS is not “just a supplier of the module” but is a professional insider of the industry and adviser to central banks and other key authorities on banknote detection

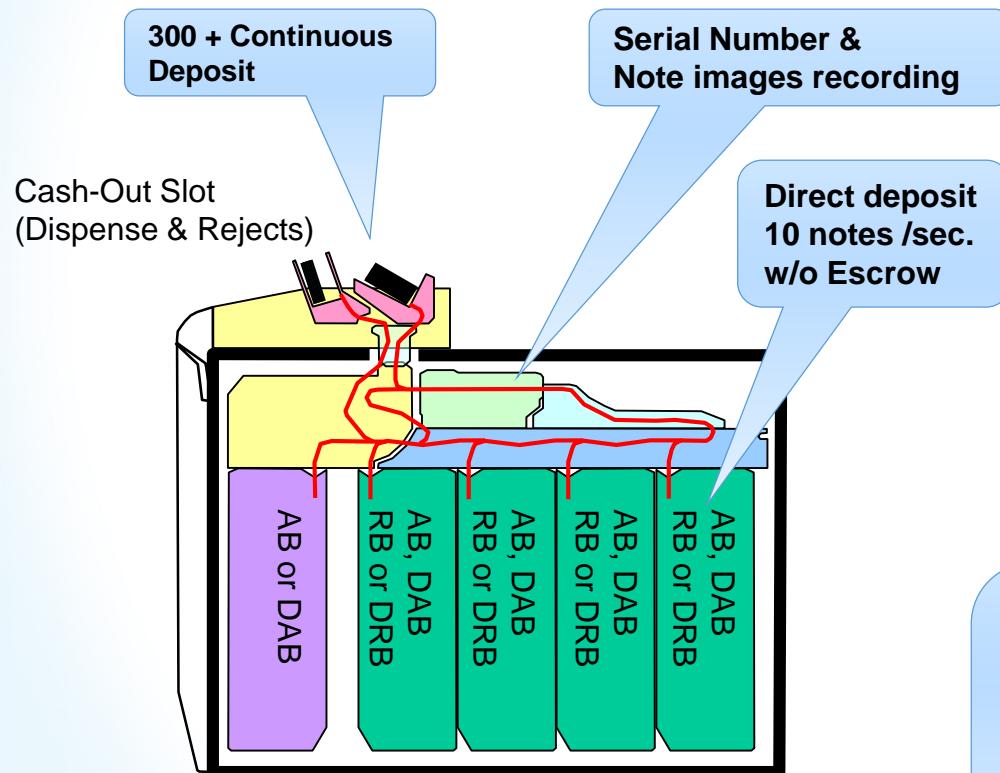


- **Accumulating the technologies & know-how in handling / sensing banknotes globally.**
 - Banknotes: Securely handle & sense polymer/hybrid, badly damaged notes etc.
 - Environments: Long-life operations resistant to high/Low temp., rain, dust.
 - Users: Tolerate user's bad operations; untidy/vertical/folded notes, foreign objects
- **High-security technologies to cope with crimes constantly developing.**
 - Verification: Accumulating technologies with worldwide counterfeits including Chinese ones which are one of the most advanced and difficult in the world. Certified by ECB's Article-6, Russians etc.,
 - Encryption: Symmetric / DES(HCM) → Asymmetric cipher / ECC (UR-series)
- **Diagnose / Predictive maintenance tools are under development**
- **OEM experiences for 20 years worldwide**



UR-T Overview

High speed & Large Capacity
with maximum flexibility in cassettes layout



Safe	Up to 40mm (UL291 ~ CEN 3 / 4)
Cash In Tray	300pcs. + Continuous feed
Cash Out Slot	100pcs.
Cassette	Single: 3400pcs. Dual: 450 + 1800pcs. (Max. 13,600pcs. + 3400RJ)
# of Room	Up to 10 (8 Recycle + 2 RJ)
Speed	10 notes / sec.

Configurable Cassette Layout



Single room
RB / AB



Dual rooms
DRB / DAB



UR-T Features

Feature : Continuous & High-speed Deposit

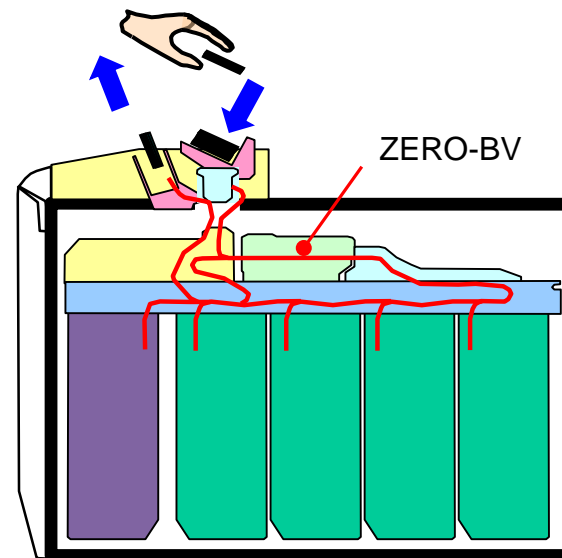
A TCR with self service ATM reliability !

- **Virtual Escrow:**

Banknotes set in Cash-in Tray are validated and transported directly into cassettes in 10 notes / second without stopping at Escrow.

- **Continuous Feed at Cash-in Tray:**

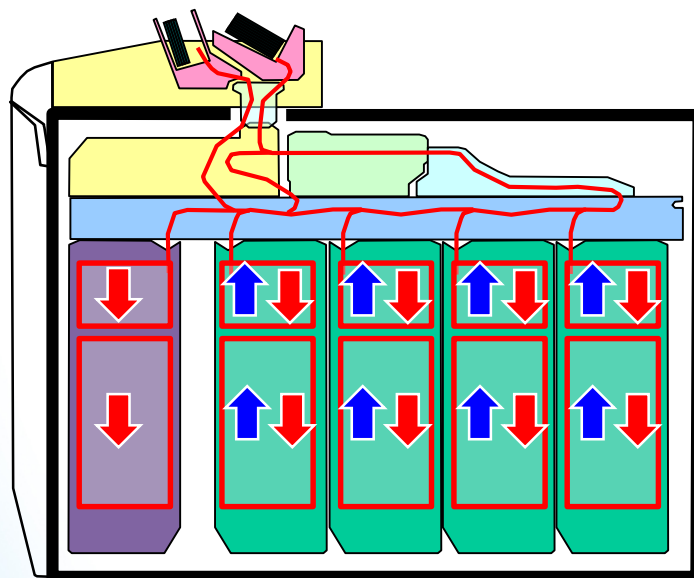
Additional notes to deposit or rejects can be set on the bundle on Cash-in Tray at anytime during the note feeding action.



Feature : Configurable Cassette Layout

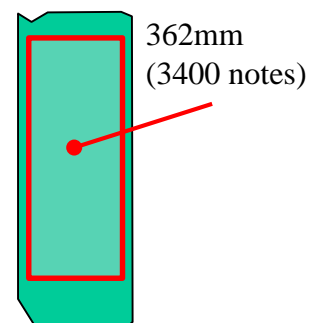
- Single or Dual Recycling Box (RB) & Acceptance Box (AB)

- recycle up to 8 different denominations and
- retract up to 2 deposit/reject only box possible.

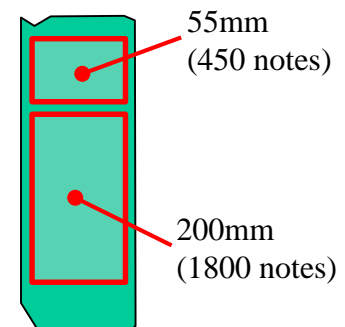


DAB DRBDRBDRBDRB

(Single)



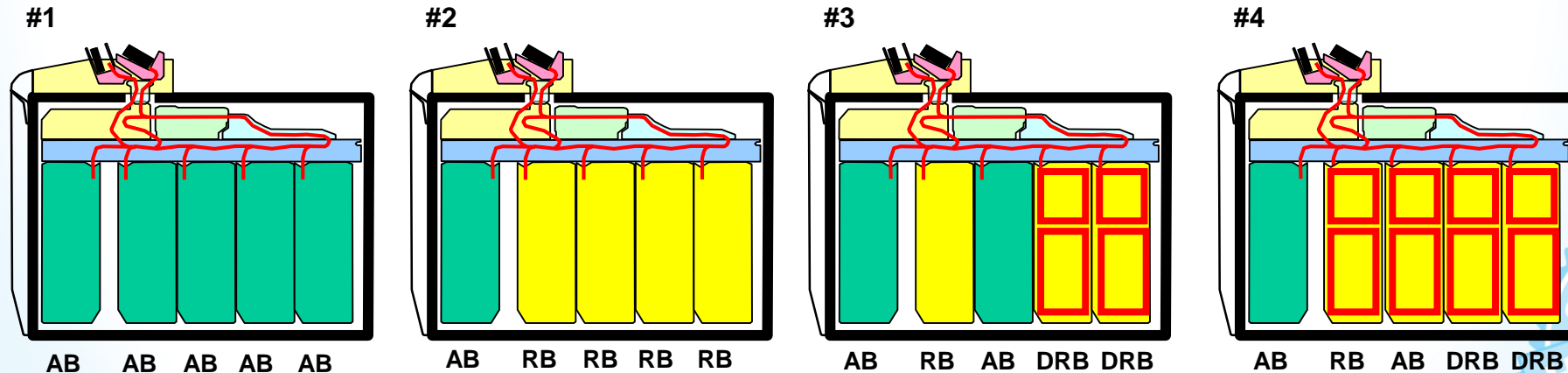
**Dual
Box**



UR-T Features

Example Cassette Layouts:

Option	Number of recycling denominations	Layout					Total capacity for Deposit	Total capacity for Recycling	Total banknote capacity
		Cas. 5	Cas. 4	Cas. 3	Cas. 2	Cas. 1			
#1	0	AB	AB	AB	AB	AB	13,600	0	13,600
#2		AB	RB	RB	RB	RB			
#3	3	AB	RB	AB	DRB	DRB	3,400	10,200	13,600
#4	8	DAB	DRB	DRB	DRB	DRB	1,800	8,200	10,000

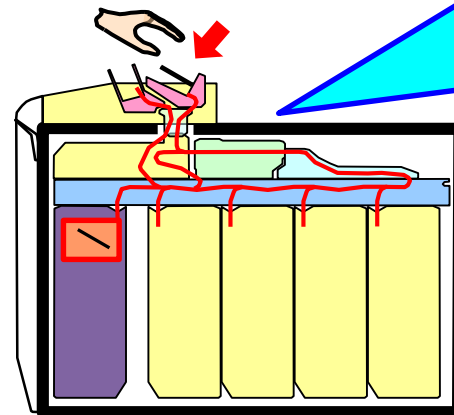


Feature : Deposit recording banknotes information

- Serial number recognition / Image capturing by ZERO-BV

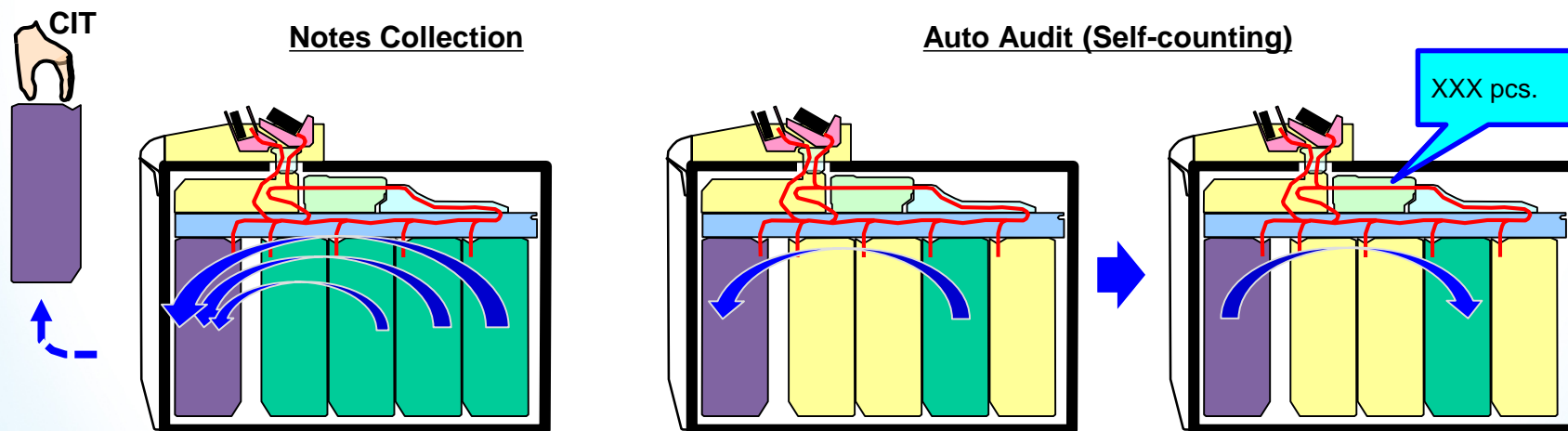
Serial numbers and whole images are available for every banknote recorded by BV.

Admin. No.	S/N
0007ECB5	MG58705376



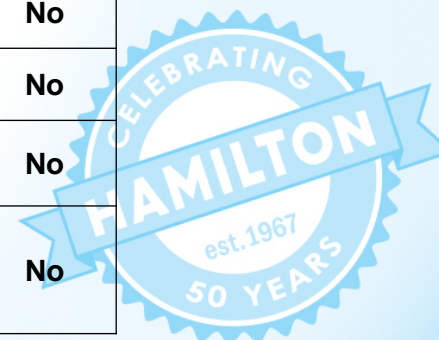
Feature : Notes movements among each cassette for self reconciliation (ie provisional credit)

- **Notes collection to Cassette 5 for CIT access**
Notes can be moved and collected to Lane #5 for CIT to take out.
- **Auto Audit (Self-counting)**
Notes in recycling cassettes can be transported / retracted to Cassette 5 then send back to each cassette for counting the number of notes at each RB.
(*Only in the case that note sizes are common between different denominations.)



Market Comparisons

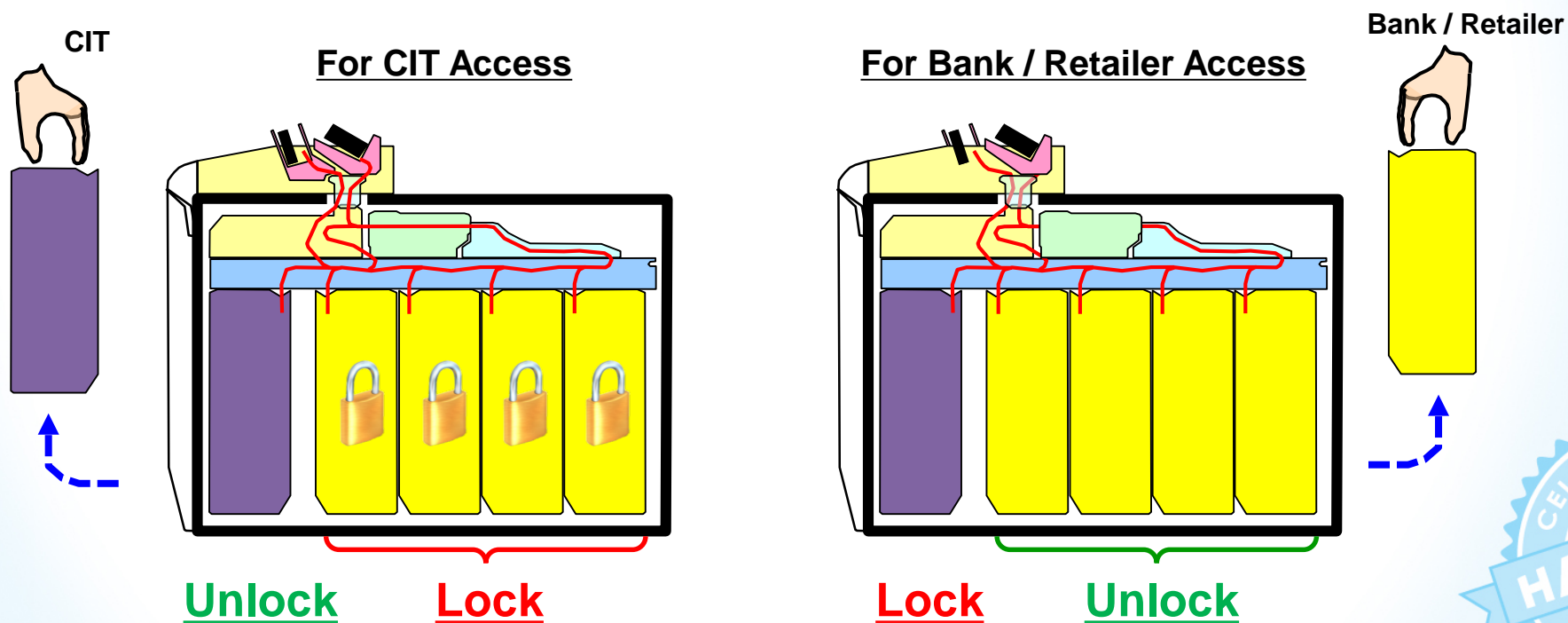
Products	# of Cas.	Capacity [Cas.]	Total Capacity	Cass. load / Restock	Continuous Feed	Speed [Notes/Sec.]	Serial No. Recognition	Auto Audit
Hamilton Safe (w/ UR-T)	4/1	3,400	17,000	Yes	Yes	10	Yes	Yes
Tidel S5	4/1	2,700	11,000	No	Yes	8	No	?
Arca CM18 Solo	Up to 12	500	6,000	No	No	5	No	No
Glory RGB-100	4/1	2,700	13,500 plus	Yes	Yes	10	Yes	No
NCR CashRecycler 11	Up to 8	500	4,000	No	No	7	No	No
Revolution 7000	4/1	3,400	16,600	No	Yes	?	No	No
Mimo 300	4/1	3,400	17,660	No	Yes	10	No	No
NautilusHyosung MS500	6/1	2,850	10,950	?	Yes	12	No	No
LG CNS LTA-350	?	?	16,250/12,000 (deposit/recycler mode)	Yes	Yes	12	Yes	No



UR-T Future Features

Feature (Future Option) : Individual Electrical Lock for separating authorizations in cassette access

PC can allow / prohibit access to each cassette by software commands to UR-T.



Thank you for listening
Any questions?

Yasuyoshi Okamoto / John Elliott

Global Business Group
Hitachi-Omron Terminal Solutions, Corp.

