Global EPOS and Self-Checkout 2019

Report and Database

June 2019

The information and data within this document are strictly confidential and must not be disclosed to a third party.

www.rbrlondon.com/retail

Global EPOS and Self-Checkout 2019 provides suppliers with data, insights and understanding that are not available from any other source

Who should purchase?	Suppliers of EPOS and self-checkout (SCO) terminals, and related products/services
Why should they purchase?	*Global EPOS and Self-Checkout 2019* is the industry's highest-quality research, used by leading suppliers because it provides: – Profiles of the EPOS and SCO markets in 53 countries across six regions, with commentary on key developments – Reliable vendor shares in each market – Data for three retail/hospitality verticals, with forecasts to 2024
How will they benefit?	*Global EPOS and Self-Checkout 2019* lets suppliers: – Identify growth markets and segments, and set sales targets – Benchmark performance versus competitors – Evaluate and refine strategy to grow revenues, margins and market share

The study provides detailed, country-by-country data on the market for programmable EPOS and self-checkout hardware

Objective: Describe current and future market for advanced hardware at point of sale/service

Scope

- **Products**: Programmable EPOS and self-checkout (SCO) hardware
- **Geographies**: Global coverage with data for 53 country markets across 6 regions
- **Segments**: Data provided for Grocery+, General Merchandise and Hospitality+
- **Measures**: Units (shipments / installed base) and value (expenditure on hardware / maintenance)
- **Vendors**: Country-level shipment figures (including data per segment) and installed base, for 35+ vendors

Methodology

- RBR has developed a model of the market, segmenting by product, geography and customer
- Primary and secondary research builds on RBR's in-house data, market understanding and industry expertise

Primary Research	Secondary Research
Speak with vendors face-to-face and via email/telephone – Own position: shipments, installed base etc. – Competitors' positions – Hardware and services pricing, plus future trends – Trends e.g. growth prospects, replacement cycles	Vendors: press releases, annual reports etc. Industry sources: websites, journals, associations etc. Stock exchange filings and analysts' stock reports Government: accounting submissions, tax authorities Cross-checks: historical data, penetration (e.g. outlets)

In addition to the study report and database, clients receive access to RBR's senior researchers; a presentation of the key findings can also be arranged

Timing and Deliverables

- Research conducted on an ongoing basis, with report issued annually in early June
- Printed and electronic (multi-user licence) copies of research findings
  - Executive report in PowerPoint containing key market statistics, trends and commentary by country and region
  - Comprehensive market database provided in Excel
- A conference call presentation of the study results can be organised if desired
- Privileged access to RBR's senior research analysts

Pricing

Options	Full Report (EPOS and SCO)	EPOS Only	Self-Checkout Only
Full Report	£50,000	£30,000	£30,000
EMEA	£25,000	£15,000	£15,000
Americas	£15,000	£9,000	£9,000
Asia-Pacific	£20,000	£12,000	£12,000
International Overview *[World and regional market coverage]*	£12,500	£7,500	£7,500

To discuss your requirements or place an order, please contact RBR on +44 20 8831 7300 or rbr@rbrlondon.com

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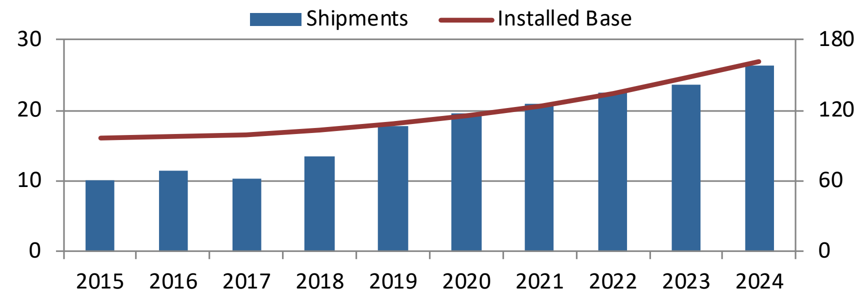
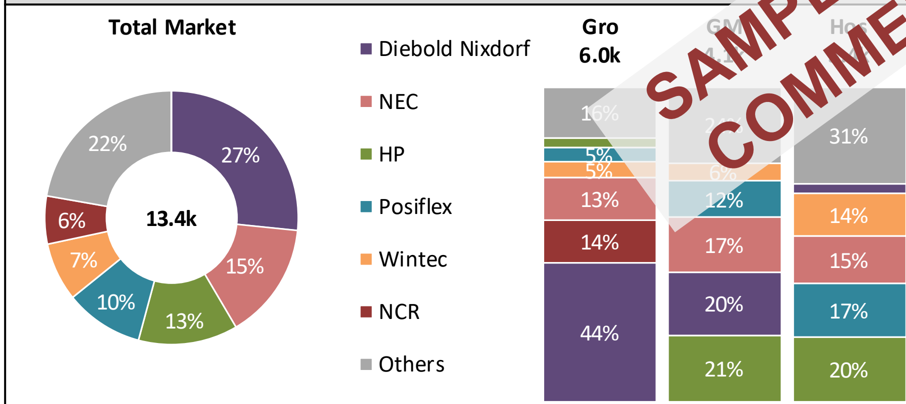
Over a quarter of EPOS shipments to Indonesia are Diebold Nixdorf terminals

EPOS Shipments and Installed Base (000s)



	Shipments		Installed Base	
2018	13.4	(#28)	103.2	(#26)
Growth 2017-18	29%	(#7)	4%	(#15)
CAGR 2018-24	12%	(#12)	8%	(#8)

EPOS Shipments by Customer Segment and by Vendor, 2018

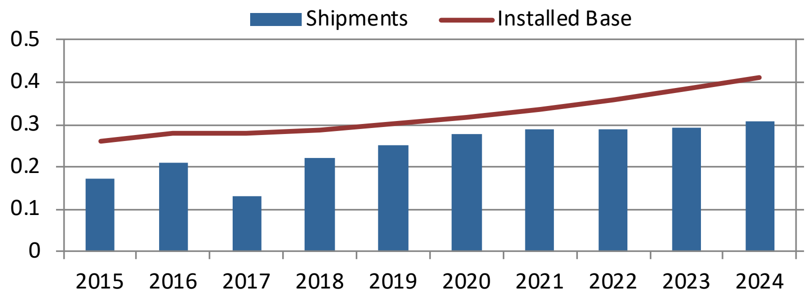


Market Commentary

- The Indonesian programmable EPOS market grew by 29% in 2018, with 13,400 shipments in total
- The retail market continues to expand, although some traditional retailers have closed stores owing to shifting customer preferences to smaller, local stores, as well as the rise of e-commerce
  - Supermarket chain Hero announced it was closing 26 of its 117 stores in early 2019
- Diebold Nixdorf is the largest EPOS vendor in Indonesia, delivering 3,600 units
  - Dairy Farm International is one of the supplier's biggest customers; the retailer operates supermarkets and hypermarkets under the Giant and Hero brands, as well as Guardian drugstores
- NEC accounted for 15% of shipments, with customers including local convenience store chain Alfamart
- HP shipped 1,700 EPOS terminals to the market, and supplied the largest number of units to GM and hospitality operators
  - Customers include department store chain Matahari and MAP Group, which franchises QSR brands including Burger King and Starbucks
  - HP units are also installed at Carrefour, which operates 91 stores
- Taiwanese vendor Posiflex and Chinese supplier Wintec also have a strong presence in the market, particularly amongst hospitality operators
- NCR supplied 800 EPOS units to Indonesia, its first shipments to the country since 2016
- Shipments of EPOS terminals are expected to continue on an upward trajectory during the forecast period, with an average of more than 20,000 units annually
- By 2024, the installed base is predicted to reach 160,000 terminals

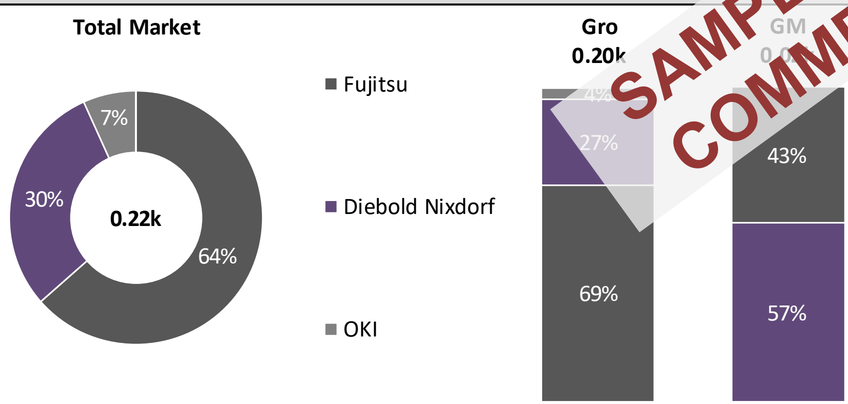
Portuguese self-checkout shipments up strongly

SCO Shipments and Installed Base (000s)



	Shipments		Installed Base	
2018	0.22	(#26)	1.44	(#19)
Growth 2017-18	71%	(#17)	3%	(#38)
CAGR 2018-24	6%	(#29)	6%	(#40)

SCO Shipments by Customer Segment and by Vendor, 2018



Market Commentary

- More than 200 SCO units were shipped to Portugal during 2018, making it the most active year for the market since 2012
  - Shipments increased by 71% compared to 2017
- Fujitsu shipped 140 SCO units in 2018, to account for 64% of the market
  - Sonae has deployed Fujitsu terminals at its Continente Modelo supermarkets
  - Jerónimo Martins is also a customer of the supplier's SCO solutions
- Diebold Nixdorf delivered around 70 terminals to Portugal
  - Most of these units were shipped to discount supermarket chain Lidl, which operates around 260 stores in the country
  - There are usually four SCO terminals per Lidl store, three of which do not accept cash
- OKI is the only other SCO supplier to the market, having sold units to both Auchan and FNAC
- A number of Portuguese retailers have experimented with alternative self-service solutions
  - In 2017, Jerónimo Martins' banner Pingo Doce trialled a mobile self-scanning solution in three stores, involving customers scanning products with their smartphones and paying at a manned EPOS unit
  - A similar pilot was launched by Sonae's Continente brand in early 2019; customers download the Continente Siga app to their smartphones, which they use to scan items, but then check out via a cashier
- With Lidl rolling out SCO units during 2018 and expected to continue in 2019, shipments of such terminals are expected to be on average around the 300 mark during the forecast period
- By 2024, the installed base is predicted to reach around 2,000 terminals

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A comprehensive market database is provided in Excel

GLOBAL EPOS AI
Programmable EPOS Shipments and Installe
Confidenti

Region	Country	Shipments 2015	2016	2017	2018	2019
North America	Canada	xx.x	xx.x	xx.x	xx.x	xx.x
North America	USA	xxx.x	xxx.x	xxx.x	xxx.x	xxx.x
North America	**Total**	**xxx.x**	**xxx.x**	**xxx.x**	**xxx.x**	**xxx.x**
Latin America	Argentina	x.x	x.x	x.xx	x.x	x.xx
Latin America	Brazil	xx.x	xx.x	xx.x	xx.x	xx.x
Latin America	Chile	x.x	x.x	x.x	x.x	x.x
Latin America	Colombia	x.x	xx.x	x.x	x.xx	x.x
Latin America	Mexico	xx.x	xx.x	xx.x	xx.x	xx.x
Latin America	Peru	x.x	x.x	x.x	x.x	x.x
Latin America	Other Latin Ame	xx.x	xx.x	xx.x	xx.x	xx.x
Latin America	**Total**	**xxx.x**	**xx.x**	**xxx.x**	**xxx.x**	**xxx.x**
Western Europe	Austria	xx.x	xx.x	xx.x	x.x	xx.x
Western Europe	Belgium	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	Denmark	x.x	x.x	x.xx	x.xx	x.x
Western Europe	Finland	x.x	x.x	x.x	xx.x	x.x
Western Europe	France	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	Germany	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	Greece	x.x	x.x	x.x	x.x	x.x
Western Europe	Ireland	x.x	x.xx	x.x	x.x	x.x
Western Europe	Italy	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	Netherlands	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	Norway	x.x	x.x	x.x	xx.x	xx.x
Western Europe	Portugal	x.x	x.x	x.x	x.x	x.x
Western Europe	Spain	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	Sweden	xx.x	xx.x	xx.x	xx.x	[illegible]
Western Europe	Switzerland	xx.x	xx.x	xx.x	x.x	[illegible]
Western Europe	Turkey	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	UK	xx.x	xx.x	xx.x	xx.x	xx.x
Western Europe	Other Western E	x.x	x.x	x.x	x.x	x.x
Western Europe	**Total**	**xxx.x**	**xxx.x**	**xxx.x**	**xxx.x**	**xxx.x**

GLOBAL EPOS AND SELF-C
Programmable EPOS Shipments - Grocery+, by Ve
Confidential - Interna

Region	Country	Total	Firich	[illegible]	Fujitsu	GSAN	Hisense	HP	NCR	NEC
Asia-Pacific	Australia	xx.x	x.x		x.x		x.x	x.x	x.x	
Asia-Pacific	China	xxx.x		x.x	x.x	x.x	xx.x	x.x	x.x	x.x
Asia-Pacific	India	x.x								x.x
Asia-Pacific	Indonesia	x.x	x.x		x.x			x.x	x.x	x.x
Asia-Pacific	Japan	xxx.x	x.x		xx.x				x.x	xx.x
Asia-Pacific	Malaysia	x.x	x.x		x.x			x.x		x.x
Asia-Pacific	New Zealand	x.x								
Asia-Pacific	Philippines	x.x								
Asia-Pacific	South Korea	x.x								
Asia-Pacific	Taiwan	x.x								
Asia-Pacific	Thailand	x.x								
Asia-Pacific	Vietnam	x.x								
Asia-Pacific	Other Asia-Pacifi	x.x								
Asia-Pacific	**Total**	**xxx.x**								

GLOBAL EPOS AND SEL
Self-Checkout Installed Base - All segmer
Confidential - Internal Use

Region	Country	Total	CCL Technology	Diebold Nixdorf	Digi	e.Jeton	Fujitsu	Gunnebo	Hisense	ITAB
Asia-Pacific	Australia	xx.x		x.x			x.x			
Asia-Pacific	China	xx.x	x.x	x.x		x.x			x.x	
Asia-Pacific	India	x.x		x.x						
Asia-Pacific	Indonesia	x.x								
Asia-Pacific	Japan	xx.x		x.x	x.x		x.x			
Asia-Pacific	Malaysia	x.x		x.x						
Asia-Pacific	New Zealand	x.x								
Asia-Pacific	Philippines	x								
Asia-Pacific	South Korea	x.x		x.x						
Asia-Pacific	Taiwan	x.x		x.x						
Asia-Pacific	Thailand	x.x		x.x			x.x			
Asia-Pacific	Vietnam	x								
Asia-Pacific	Other Asia-Pacifi	x.x		x.x						
Asia-Pacific	**Total**	**xx.x**	**x.x**	**x.x**	**x.x**	**x.x**	**x.x**		**x.x**	

RBR is recognised for its analytically rigorous, facts-based approach, global research capabilities and high-quality products

Key Qualifications
▸ 30 years' experience delivering international market research to diverse blue-chip client base ▸ Expertise in studies of hardware, software and services ▸ Carrying out annual study of global market for advanced point-of-sale hardware since 2008 ▸ Strong understanding of general and technology trends in the retail industry ▸ Reputation for premium, independent syndicated research studies funded by industry suppliers

Types of Client
Technology providers e.g. Diebold Nixdorf, Fujitsu, HP, Microsoft, NCR, PayPal, Toshiba, Visa **Consultancies** e.g. Bain & Company, Boston Consulting Group, McKinsey & Company **Private equity firms** e.g. Advent International, Bain Capital, Warburg Pincus **Investment banks** e.g. Goldman Sachs, Morgan Stanley

The study covers programmable EPOS and self-checkout hardware, and defines three customer segments

Products

- EPOS — An Electronic Point of Sale ("EPOS") unit is a device which processes transaction data at the point of-sale (or point-of-service) and which has the capability to transmit data to (and receive data from) other computers electronically, in an unrestricted manner
- Programmable EPOS — A "programmable EPOS" unit is, in addition:
  – designed in its entirety with a retail/hospitality (etc.) environment in mind, in terms of lifespan, power consumption, reliability, environmental challenges (dust, grease, heat), connectivity etc.
  – fully user-programmable, running an open operating system and dedicated POS application
  – purpose-built for transaction processing
  – designed to be stationary (because of peripherals, cabling, weight etc.)
- Self-Checkout — A "self-checkout" (SCO) unit has many of the same characteristics as a "programmable EPOS" unit, but allows the customer to handle the "checkout" process of goods already selected, rather than being served by a member of staff

Customer Segments

Grocery+

- Supermarkets
- Hypermarkets
- Discounters
- Convenience stores
- Drugstores/pharmacies

General Merchandise

- Mass merchandisers
- Cash and carry / warehouse club
- Department / variety stores
- Speciality retail - soft goods
- Speciality retail - hard goods

Hospitality+

- Hotels
- Restaurants
- Leisure
- Other service industry

Data are provided for 53 markets across 6 regions

Asia-Pacific	North America	Latin America	Western Europe	Central & Eastern Europe	Middle East & Africa
Australia	Canada	Argentina	Austria	Czechia	Israel
China	USA	Brazil	Belgium	Hungary	Morocco
India		Chile	Denmark	Poland	Saudi Arabia
Indonesia		Colombia	Finland	Russia	South Africa
Japan		Mexico	France	Slovakia	UAE
Malaysia		Peru	Germany	Ukraine	Other
New Zealand		Other (incl. Caribbean)	Greece	Other	
Philippines			Ireland		
South Korea			Italy		
Taiwan			Netherlands		
Thailand			Norway		
Vietnam			Portugal		
Other			Spain		
			Sweden		
			Switzerland		
			Turkey		
			UK		
			Other		