VeriFone

The leading global provider of technology that enables secure electronic payment transactions

- ⮯ VeriFone Systems, Inc. ("VeriFone"), NYSE: PAY

- ⮯ Founded in 1981

- ⮯ 2,500 staff

- ⮯ $1 billion Revenue in FY2010

- ⮯ Active in over 110 countries

- ⮯ No. 1 or No. 2 share in all our markets

- ⮯ Systems installed in over 20 million locations globally

The Transformation of "Payments"

Point of Sale	Point of Interaction

- One-Way Communication
- Simplistic
- Anonymous

- Two-Way Dialogue
- Complex
- Personal

VeriFone
THE WAY TO PAY

The Transformation of "Payments"

Point of Interaction

Point of "Intelligent checkout"

+ **Knows who you are (opt in)**
+ **Know where you are**
+ **Knows your coupons**
+ **Is trusted, safe, secure**
+ **Single User Interface**
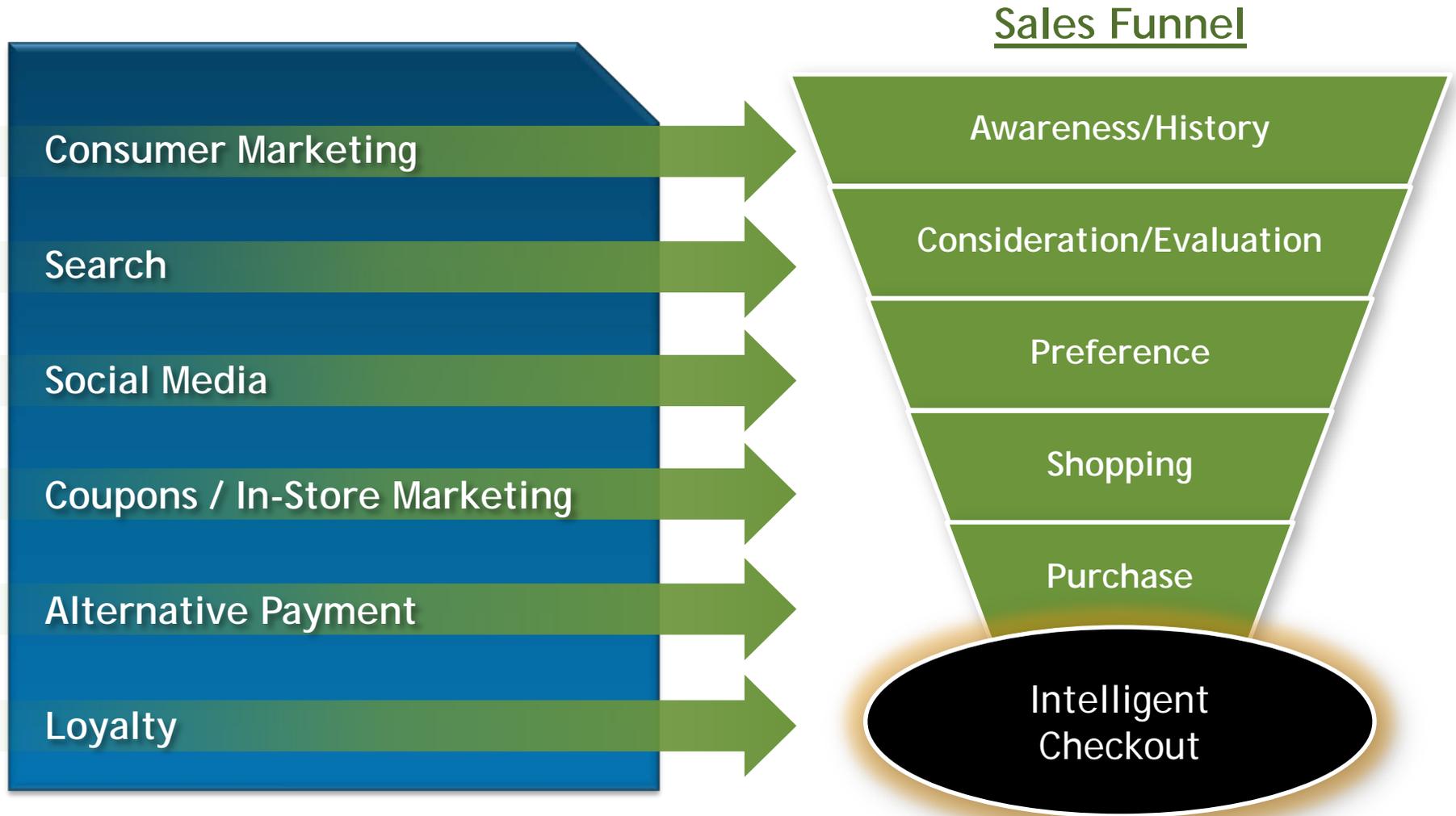+ **Clean Seamless Experience**

= **Intelligent Checkout**

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Who Wants In?

Consumer Marketing

Search

Social Media

Coupons/In-store Marketing

Alternative Payment

Loyalty

Intelligent Checkout

Mobile Drives the need for Intelligent Checkout

The Sales Funnel of the Future Converges at POS

Sales Funnel

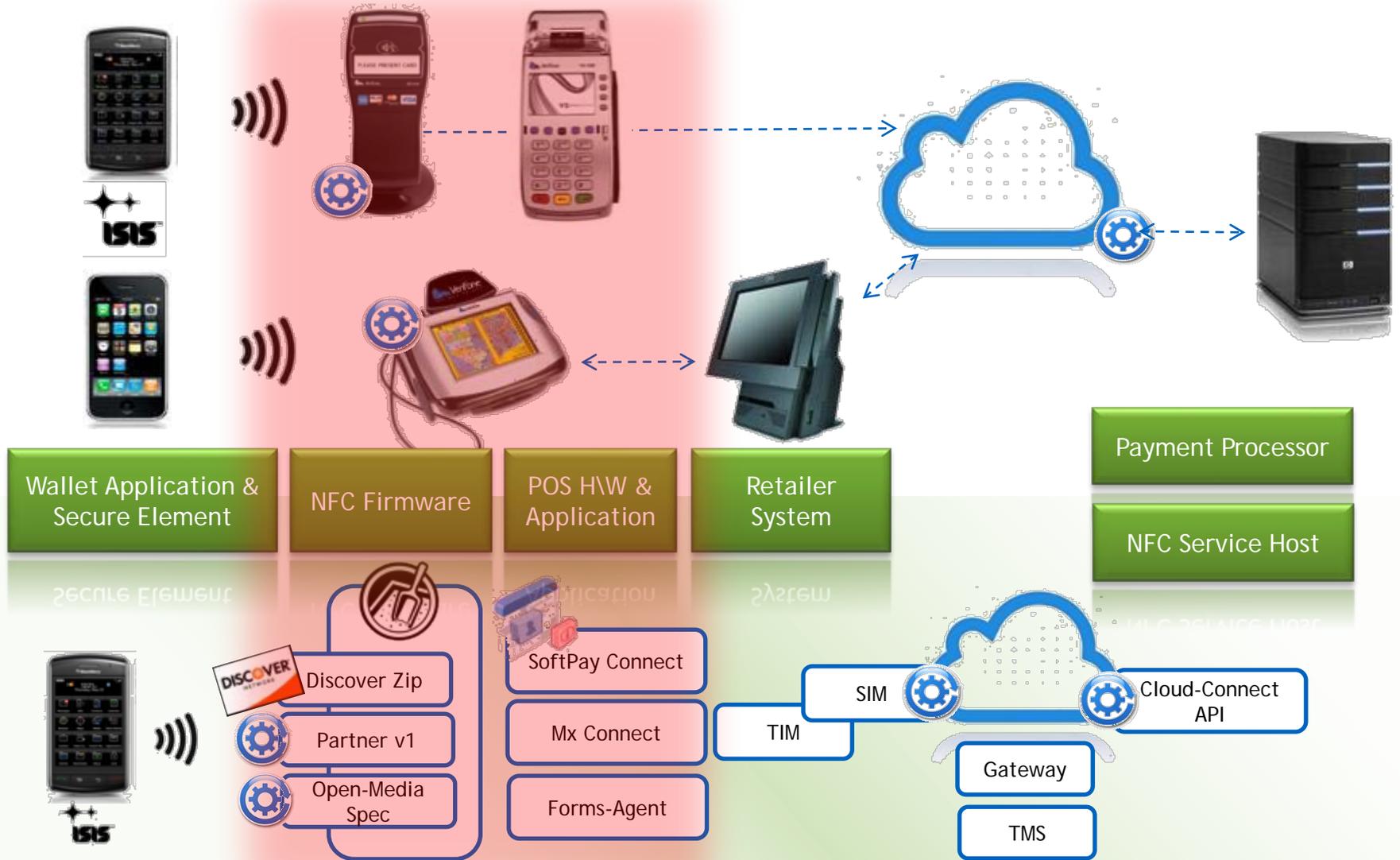| Consumer Marketing | → | Awareness/History |
Search	→	Consideration/Evaluation
Social Media	→	Preference
Coupons / In-Store Marketing	→	Shopping
Alternative Payment	→	Purchase
Loyalty	→	Intelligent Checkout

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The POS Is Beach Front Property....

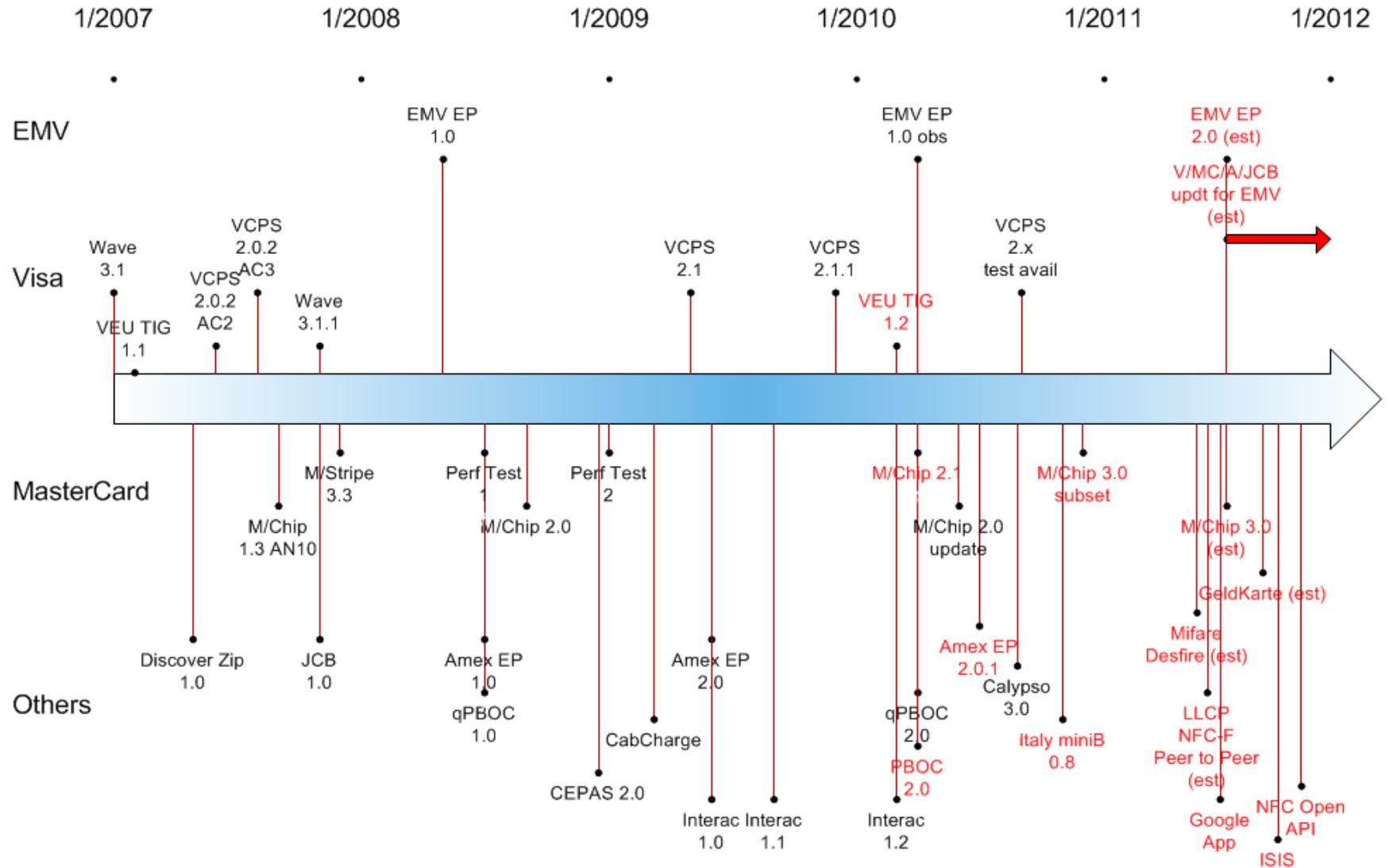VeriFone already has the real estate at checkout and the strong relationships with retailers.

Understanding the Architecture

Wallet Application & Secure Element

NFC Firmware

POS H\W & Application

Retailer System

Payment Processor

NFC Service Host

Discover Zip

Partner v1

Open-Media Spec

SoftPay Connect

Mx Connect

Forms-Agent

TIM

SIM

Cloud-Connect API

Gateway

TMS

Understanding the Architecture and management challenges

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Contactless & NFC Software Update Roadmap

Managing Multiple New Services at Checkout

Cards

VISA — payWave

MasterCard — PayPass

DISCOVER — Zip

AMERICAN EXPRESS — ExpressPay

Wallets

Google

ISIS

PayPal

GROUPON

facebook

And so on….

BUY ONE T-SHIRT – GET ONE 50% OFF

Your Total is: $112.75

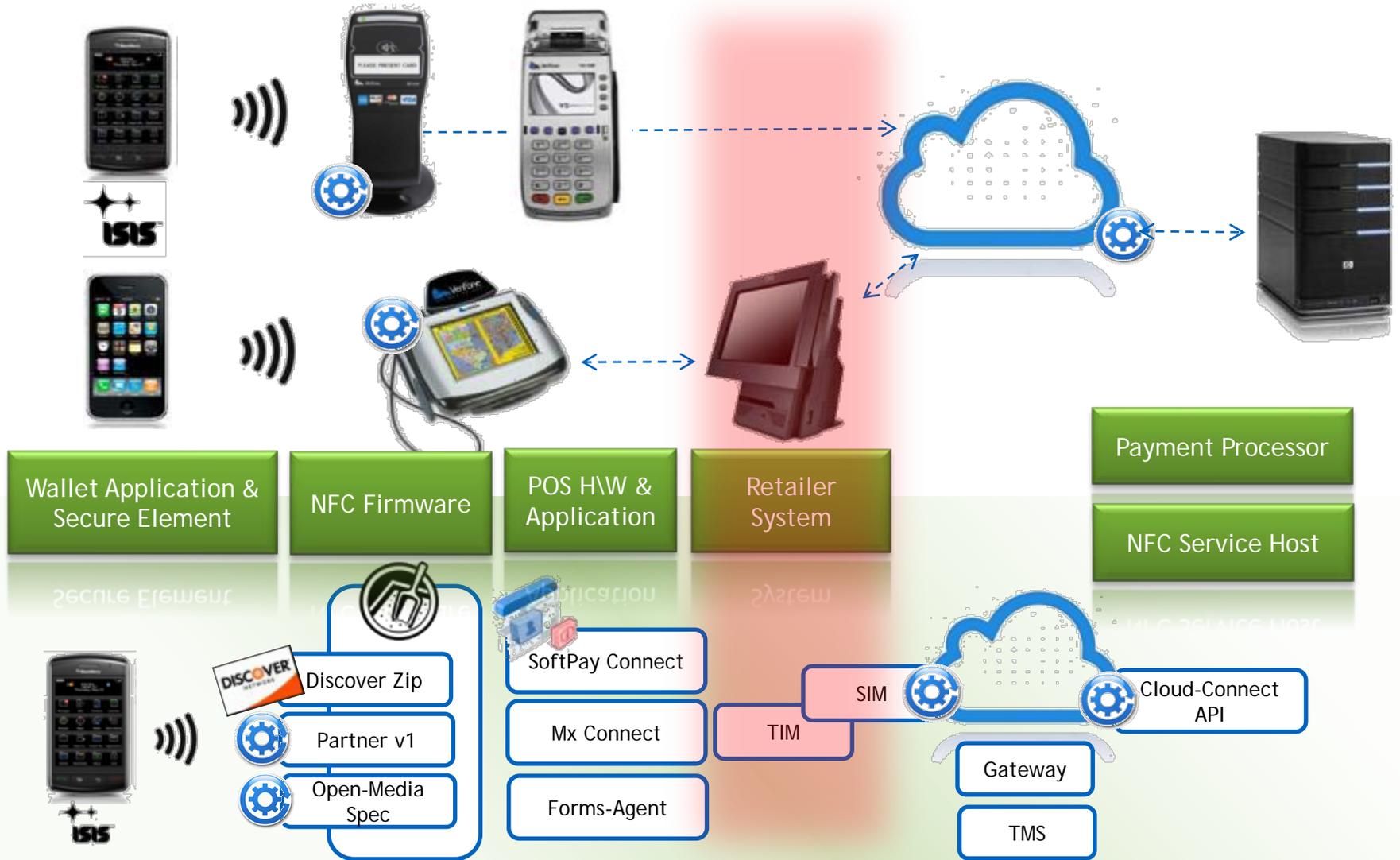|	
Belt – 80419346	$15.00
Men's denim – 20469312	$45.00
T-shirt – 60469845	$12.50
T-shirt – 60469868	
SALE 2nd @ 50%	$6.25
Sweater – 38014882	$34.00

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Understanding the Architecture and security challenges

Solving for Credit/Debit Payment System Vulnerabilities

- CRIND-tampering

- Wireless access

- Network access

- Unencrypted data
- Network access
- Chargeback files

VISA DATA FIELD ENCRYPTION BEST PRACTICES

Security Goal	Best Practice
Limit clear text availability of cardholder data and sensitive authentication data to the point of encryption and the point of decryption.	1. Clear text cardholder and authentication data shall only be available at the point of encryption and decryption.
	2. All cardholder data shall be encrypted using only approved encryption algorithms (e.g. AES, TDES).
	3. All cardholder data and
	4. Sensitive authentication
Use robust key management solutions consistent with international and/or regional standards.	5. Keys shall be managed
	6. All keys and key compo
	7. Documentation
	8. a) Keys shall b
	8 b) If remote key
	9. Keys used in th
Use key-lengths and cryptographic algorithms consistent with international and/or regional standards.	10. Encryption key
	11. FPE must be e
Protect devices used to perform cryptographic operations against physical/logical compromises.	12. Devices used to perfor hardware and software
	13. Keys shall be protected and their integrity and a
Use an alternate account or transaction identifier for business processes that requires the primary account number to be utilized after authorization.	14. If any cardholder data

ENCRYPTS CARD DATA TO PREVENT COMPROMISES

VERISHIELD PROTECT

PCi Security Standards Council ™

Card Issuers

- Eavesdropping on store and corporate networks

Terminals

Vastly Simplifies Retailer's Security
- Eliminates usable cardholder data from POS applications, networks and servers
- Encrypts card holder information, at the exact instant of acceptance, inside a secure, trusted VeriFone payment device and keeps it encrypted throughout your enterprise
- Compliant with Visa's best practices for data field encryption
- Brings you closer to PCI DSS compliance and may reduce costs of auditing
- Supports broadest range of card payments, whether they are magstripe, contactless or EMV-based,

VERISHIELD PROTECT

MX 800 SERIES	Vˣ SOLUTIONS		STORE POS	MERCHANT HEADQUARTERS	ACQUIRER AND/OR PROCESSOR
MX 880 MX 870 MX 860	MX 850 MX 830	VX 610 VX 570 VX 610		BACK OFFICE SERVER	
		VX 670 VX 810 VX 810 DUET		COMPANY NETWORK SERVER	

ENCRYPTION PROCESS

DECRYPTION APPLIANCE
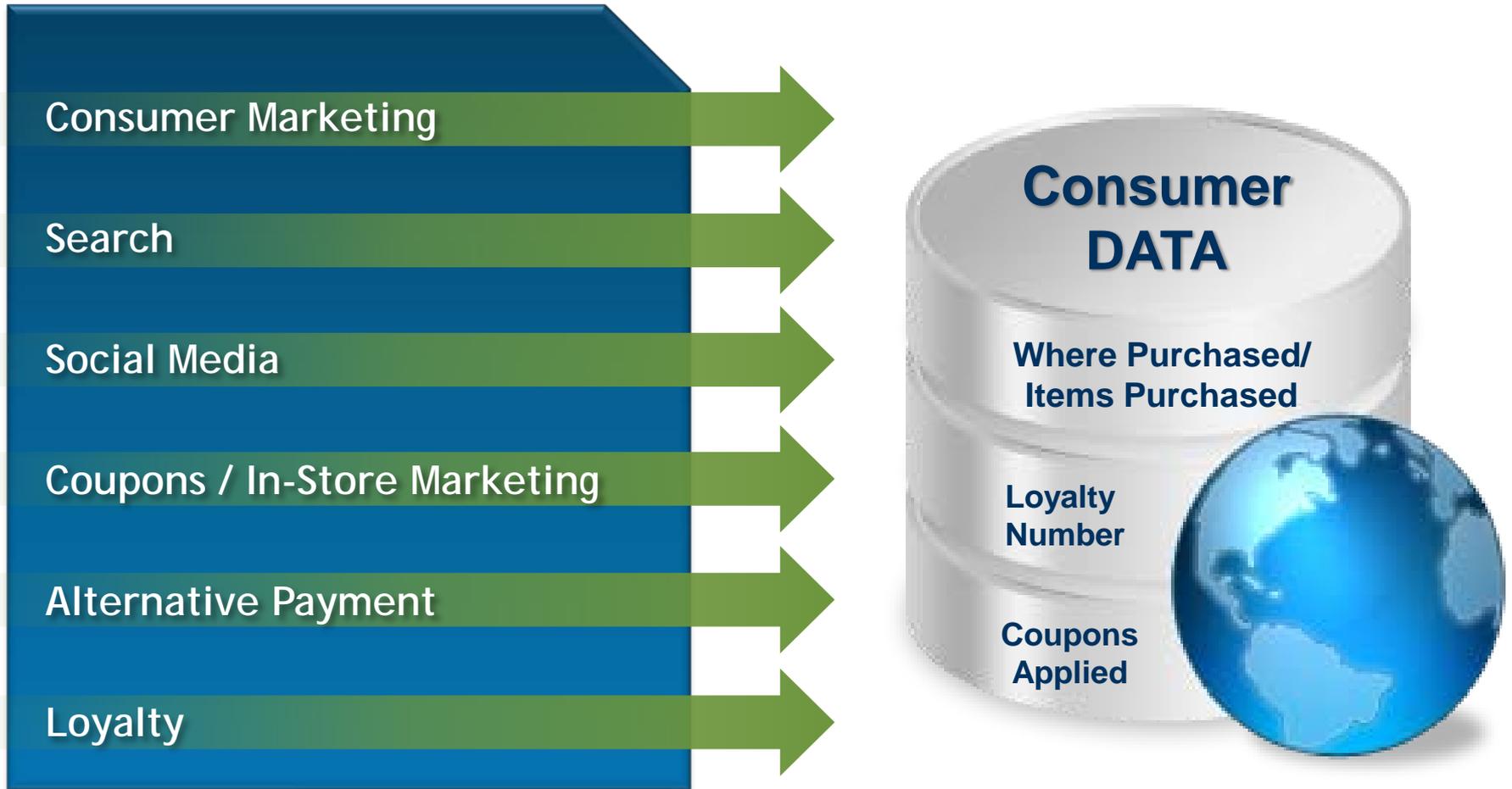
VERISHIELD PROTECT   TRUSTED LINK

Cardholder data is never exposed with VeriShield Protect. VHE protects the raw cardholder data received by the POS device so that is never at risk and is safely transmitted to the DA. The DA can be managed at the retailer, off site or at the acquirer/processor.

- PINpad-tampering
- Skimmers
- Overhead cameras
- Rogue applications

- Passwords

- Passwords

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Mobile Introduces a whole new world of data to protect...

- Consumer Marketing
- Search
- Social Media
- Coupons / In-Store Marketing
- Alternative Payment
- Loyalty

Consumer DATA

- Where Purchased/ Items Purchased
- Loyalty Number
- Coupons Applied

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Beginning to Enable Intelligent Checkout in Taxis

From...

- Securely Processing Traditional Payments
- Providing advertisers with a truly captive audience with significant "dwell time"
- Targeting demographics, psychographics, time of day, and real-time location

to

- Enabling social and location-based interactivity between marketers and consumers
  - NFC, SMS & QR codes
  - Digital & paper coupons/receipts
  - Customer acquisition and data capture

to

- Letting consumers search for and purchase goods while inside the taxis
  - Daily deals
  - Movie and show tickets
  - Lottery Tickets

In Markets Throughout the US and UK

Boston

NYC

Chicago

Philadelphia

San Francisco

Wash DC
Baltimore

Las Vegas

Los Angeles

Raleigh-Durham

San Diego

Atlanta

Dallas

Tampa

Miami /
Ft. Lauderdale

London

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But Taxis are Just the Beginning

Intelligent checkout is being enabled in multiple verticals through the VeriFone Digital Network

V NET

- Over 10,000 taxis in 10+ markets today

- Continually upgrading functionality

- Further global expansion underway

- Leveraging PCI upgrade to media enable the pump

- Allow geographic and daypart targeting

- Opt-in personalization

- Couponing

- Pay-at-Pump purchasing

- Advertising and merchant promotions

- Integration with loyalty and 3rd party apps

- Social and location-based media

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Six Rules of Mobile Commerce Success

#1 • Deployment and management of complex NFC technologies will require significant ongoing services from the retailer's payment systems provider.

#2 • Mobile commerce must add value to the consumer.

#3 • Mobile commerce must be streamlined with existing POS services and managed well for the retailer.

#4 • Mobile commerce must become ubiquitous to be successful.

#5 • Mobile commerce must be integrated with other forms of payment.

#6 • Mobile commerce must be ironclad secure.

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Making Checkout Intelligent

Building the architecture

Bringing the players together

Powering marketing and interactivity

Providing value to consumers