



# Oracle Maximum Availability Architecture in the Cloud

OOW 2017 – Oct. 01 - San Francisco

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# Agenda

- ✔ About BrScan
- ✔ Critical Solutions
- ✔ Downtime
- ✔ Previous Infrastructure
- ✔ New Reality, New Demands
- ✔ Why BrScan Chose Oracle?
- ✔ Best Scenario for BrScan: OCM + OPC (DR)
- ✔ Maximum Availability Architecture
- ✔ BrScan's Journey to the Cloud
- ✔ Q&A

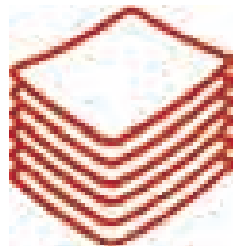
# About BrScan

- ✓ Brazilian tech company
- ✓ Provide SaaS solutions
- ✓ Best solution for automated ID fraud detection
- ✓ Most widespread e-signature solution
- ✓ One of the largest e-BPO companies for the telecom sector
- ✓ Critical solutions – high performance and availability
- ✓ Serve major banks and telecom companies in Brazil
- ✓ 35% growth y-o-y for the last 7 years



# About BrScan

## Some numbers



More than  
**5 B**  
pages digitized



More than  
**USD 500 MM**  
in document fraud detection  
savings per year

**+400 K  
users**

connected to  
BrScan's solutions



**+20 K POS**  
spread all over Brazil



More than  
**USD 2.1 B**  
In financial transactions  
per month



**+100 K**  
IDs checked per  
day



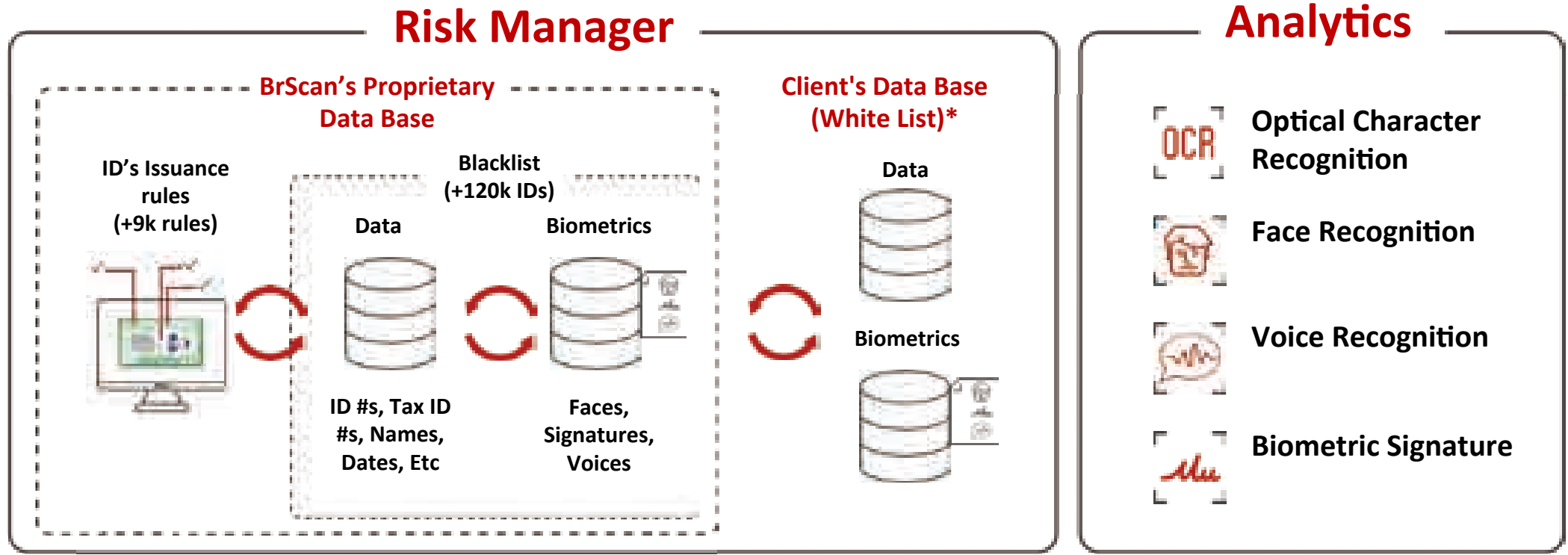
More than  
**70 K**  
sales audit per day



**+500  
employees**

# Critical Solutions

BrSafe Risk Manager: automated ID fraud detection

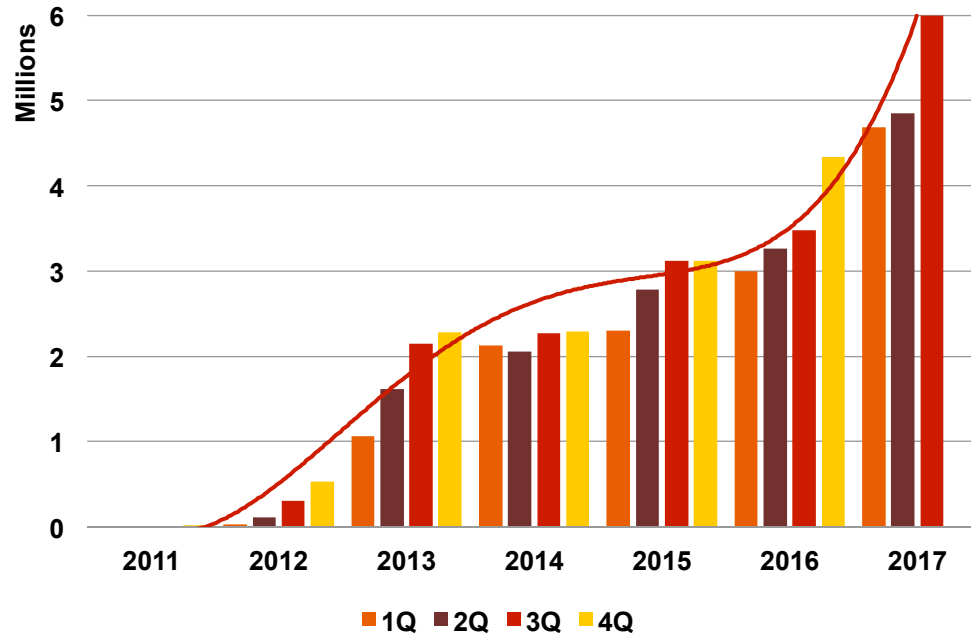


\* If authorized by the client

# Critical Solutions

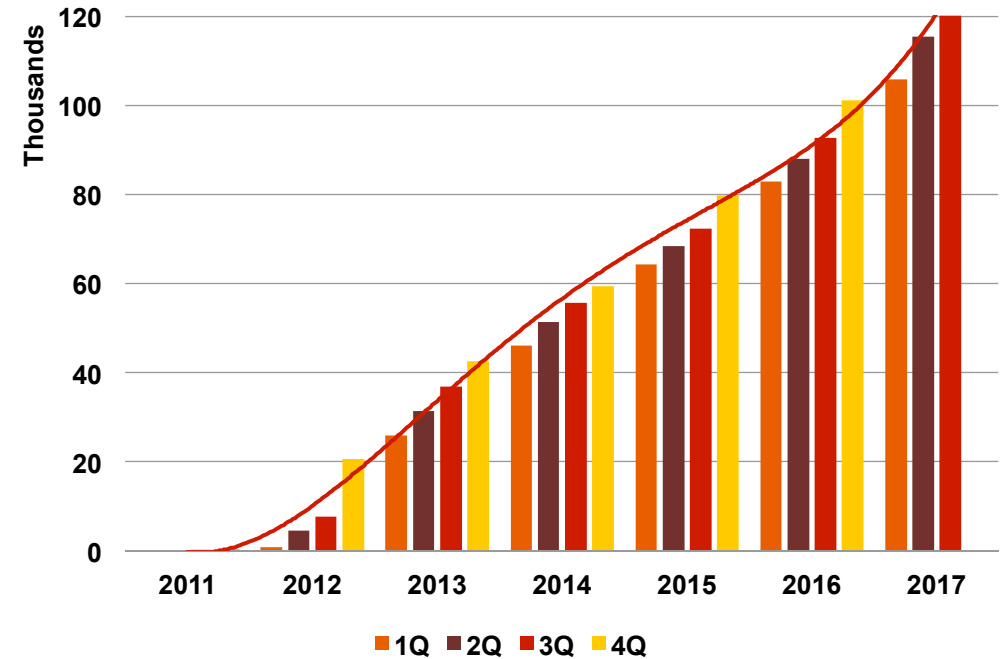
## BrSafe Risk Manager: automated ID fraud detection

### ID Checks



**Total ID checks: 57 MM**  
**Current volume: +100K/day**  
**2011/2017 y-o-y growth: 289%**

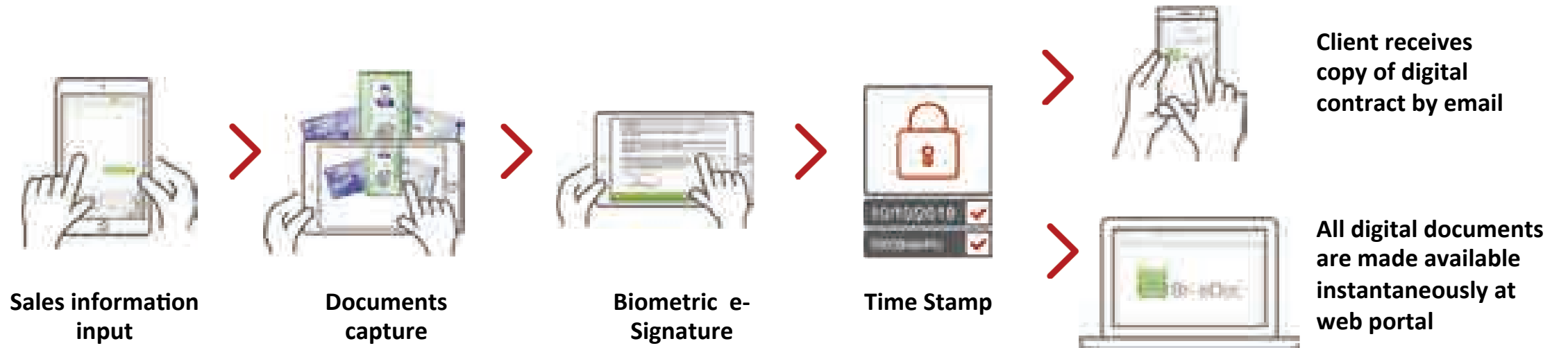
### Users



**Total users: 120K**  
**24 x 7 x 365 (availability & support)**  
**2011/2017 y-o-y growth: 266%**

# Critical Solutions

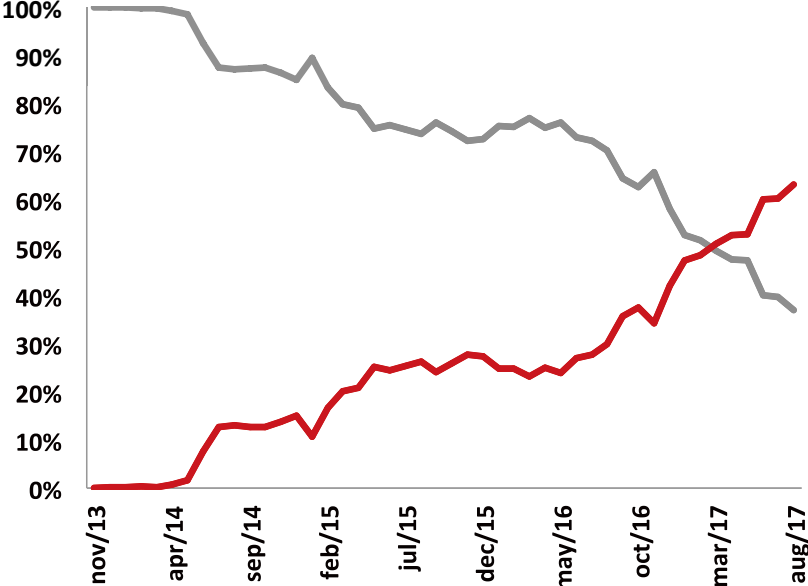
## E-signature: Br-eDoc



# Critical Solutions

## E-signature: Br-eDoc

e-Signature vs. Scanner



63% +700k/mo.

37% +400k/mo.

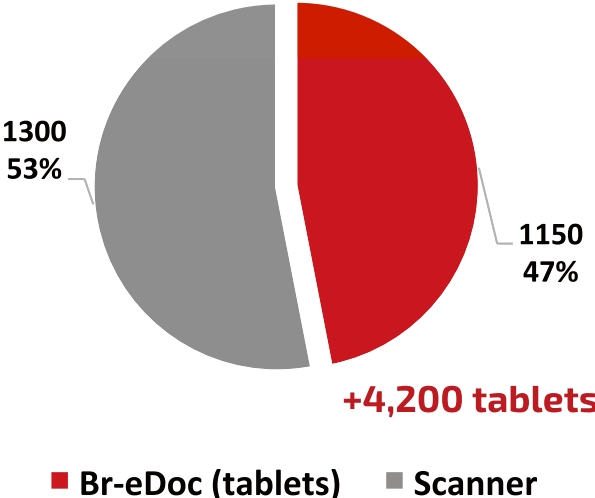
— Scanner

— Br-eDoc

**11 MM**

E-SIGNATURE CONTRACTS

Points of Sale



+4,200 tablets

■ Br-eDoc (tablets) ■ Scanner

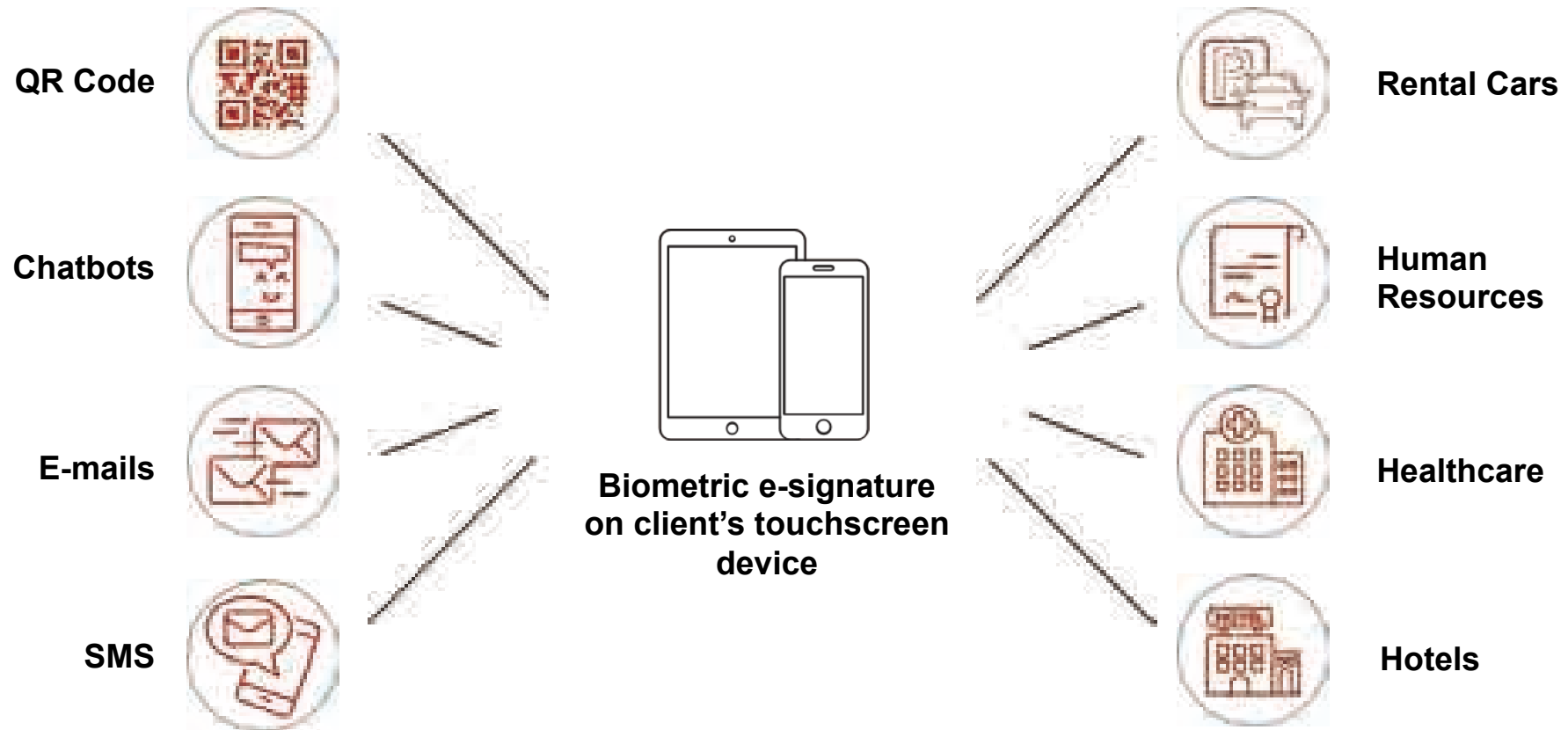
**44 MM**

PAPER SHEETS SAVINGS



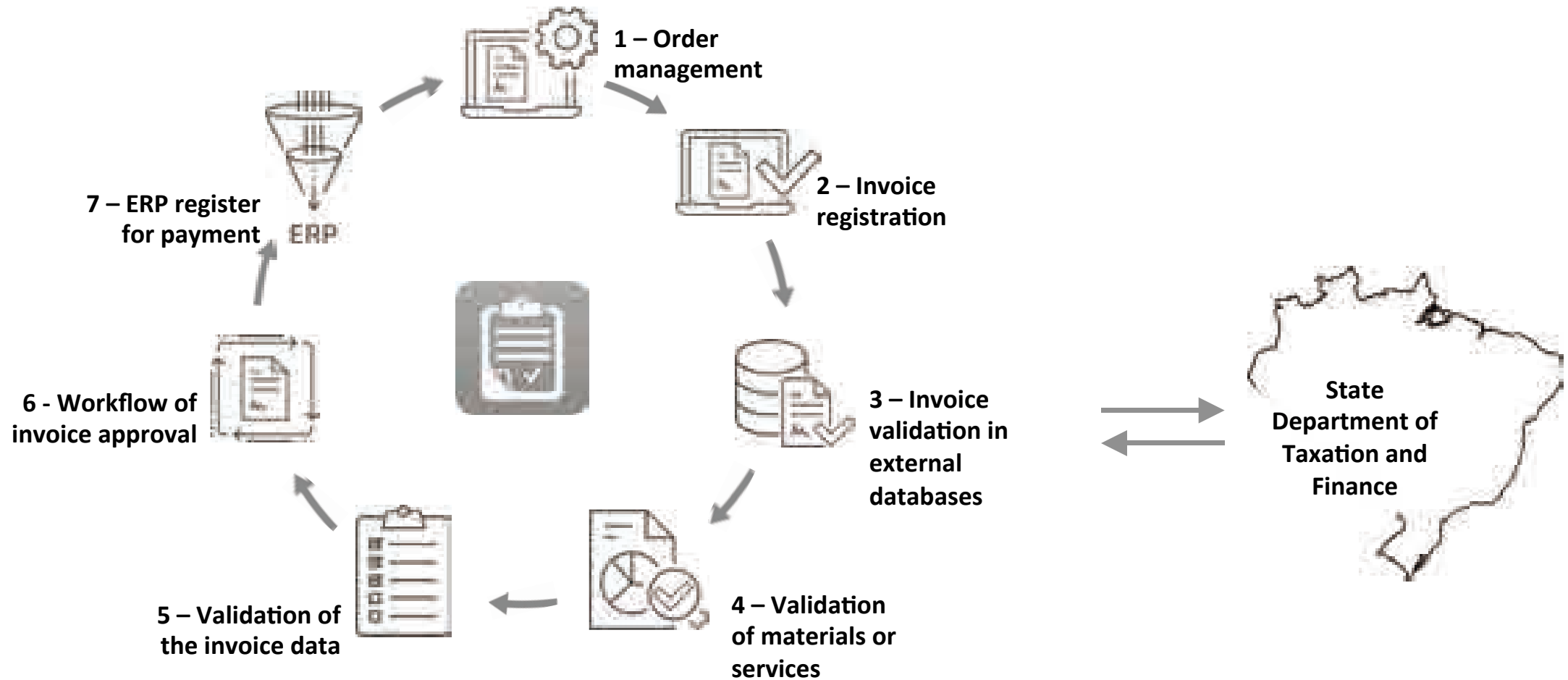
# Critical Solutions

## E-signature: Other Possibilities



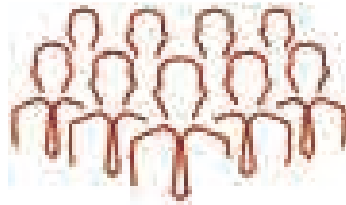
# Critical Solutions

BrNotas



# Critical Solutions

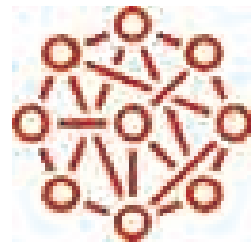
BrNotas



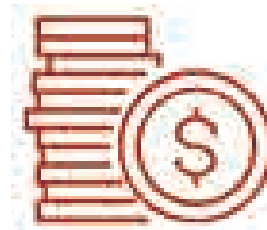
**+90k**  
users



**+140k**  
processed  
invoices per  
month



**+200k**  
online SAP  
transactions per month



**+USD 1.1 B**  
in financial  
transactions per month

# Downtime

## Planned downtime

System upgrades/  
changes

Database changes

## Unplanned downtime

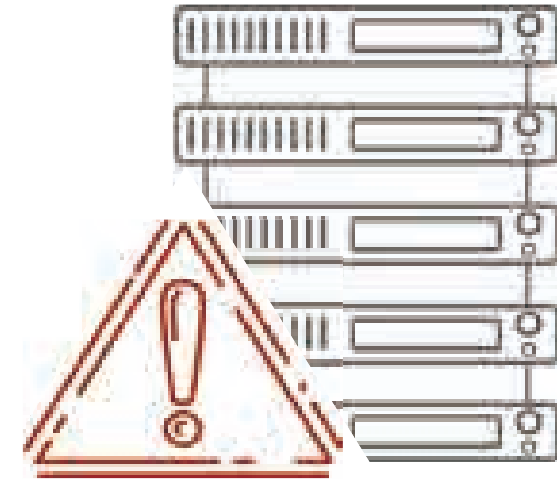
Crashes ✓

Cyber attacks

Systemic Failures ✓

Database failures and  
disasters ✓







Human errors ✓



# Previous Infrastructure









### Hosting

-  **64** Cores
-  **1** Database
-  **2** TBs block storage
-  **10** TBs Backup storage
-  **40** Mbps link
-  **Shared Firewall**



### In House

-  **144** Cores
-  **0** Database
-  **30** TBs block storage
-  **70** TBs Backup storage
-  **50** Mbps link
-  **Dedicated Firewall**



# New Reality, New Demands



- ✓ Scalability and flexibility: expansion of computational capacity according to demand (quick and easy)
- ✓ High availability and performance
- ✓ High level of security
- ✓ Data stored within Brazil
- ✓ Isolation of environments
- ✓ Up to date Disaster Recovery environment
- ✓ Physical audit by clients

# Why BrScan Chose Oracle?



- ✓ Ready and easy to scale
- ✓ Zero latency solution
- ✓ Automated DR
- ✓ In house cloud
- ✓ Data residing within Brazil
- ✓ Built-in, next generation and local solution
- ✓ Best cost benefit relation: HW + SW + management + support
- ✓ Cloud ready for physical audits
- ✓ Oracle replaces the machine on contract renewal
- ✓ Oracle-operated machine: focus on business

# Best Scenario for BrScan: OCM + OPC (DR)



## Oracle Cloud Machine

### PRIMARY SITE (PRODUCTION)

Integrated next generation solution

In house cloud: HW + SW + management + support

Agility and scalability: planned growth according to BrScan's needs

Real time replication

Real time replication

## Oracle Public Cloud

### BACKUP SITE (STANDBY)

Business continuity: automated disaster recovery

100% OPEX:  
lower investments and growth according to demand

Single vendor support: more agility in service





# Best Scenario for BrScan: OCM + OPC (DR)



## Oracle Cloud Machine

### PRIMARY SITE (PRODUCTION)

- 200** OCPUs (Compute)
- 8** Database (DBCS) Extreme Performance
- 60** TBs block storage
- 128** TBs object & Backup storage

Real time replication

Real time replication



Dedicated firewall



100 Mbps link

## Oracle Public Cloud

### BACKUP SITE (STANDBY)

- 40** OCPUs (Compute)
- 4** Database (DBCS) Extreme Performance
- 10** TBs block storage
- 20** TB object & Backup storage



# Maximum Availability Architecture

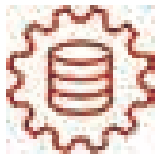
Enterprise Extreme Performance solution



**Maximum Availability**



**Security**

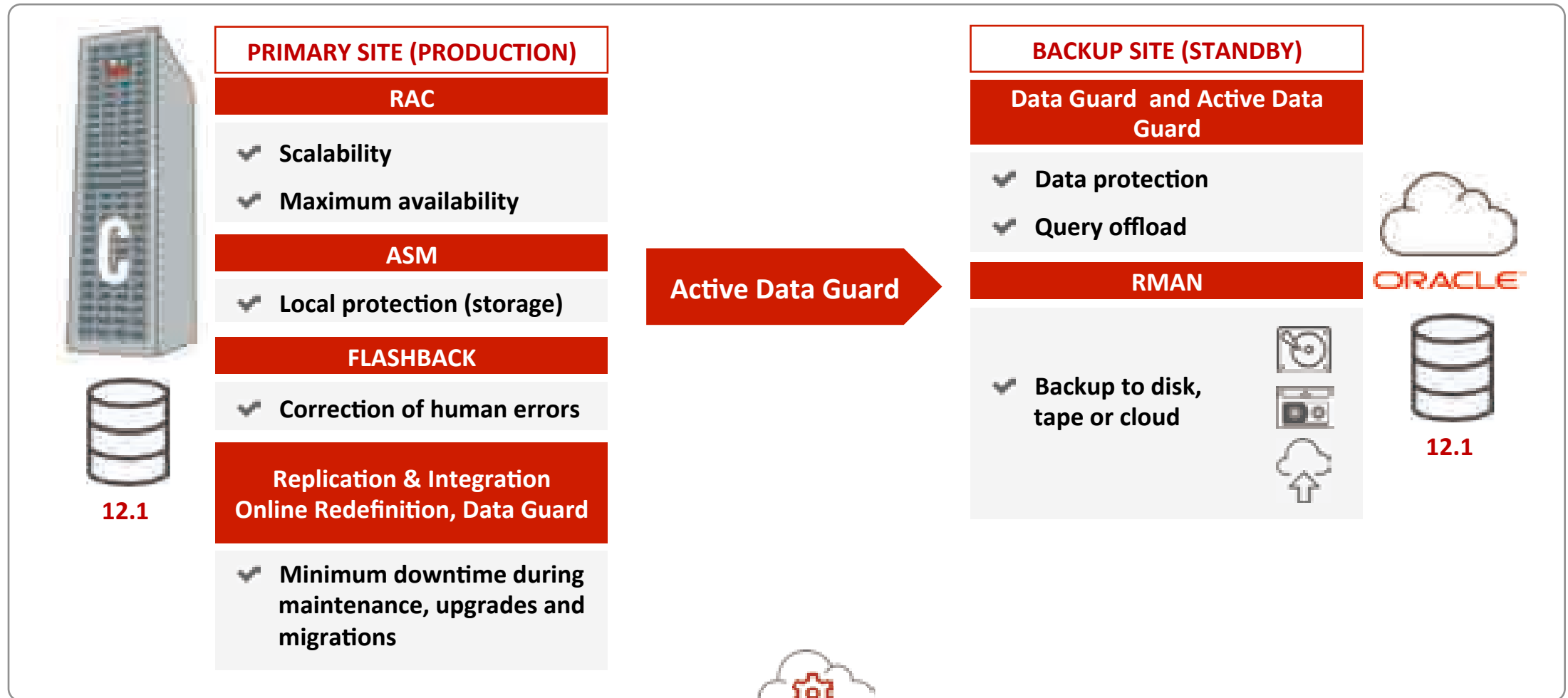


**Management**

- ✓ **Advanced security**
- ✓ Label security
- ✓ Database vault
- ✓ OLAP
- ✓ Advanced analytics
- ✓ Spatial & graph
- ✓ Diagnostic pack
- ✓ **In-memory database**
- ✓ **Real application cluster**
- ✓ **Multitenant**
- ✓ **Active Data Guard**
- ✓ Partitioning
- ✓ Real application testing
- ✓ Advanced compression
- ✓ Tuning pack
- ✓ Database lifecycle management pack
- ✓ Data masking pack
- ✓ Test data management pack
- ✓ Cloud management pack for Oracle database

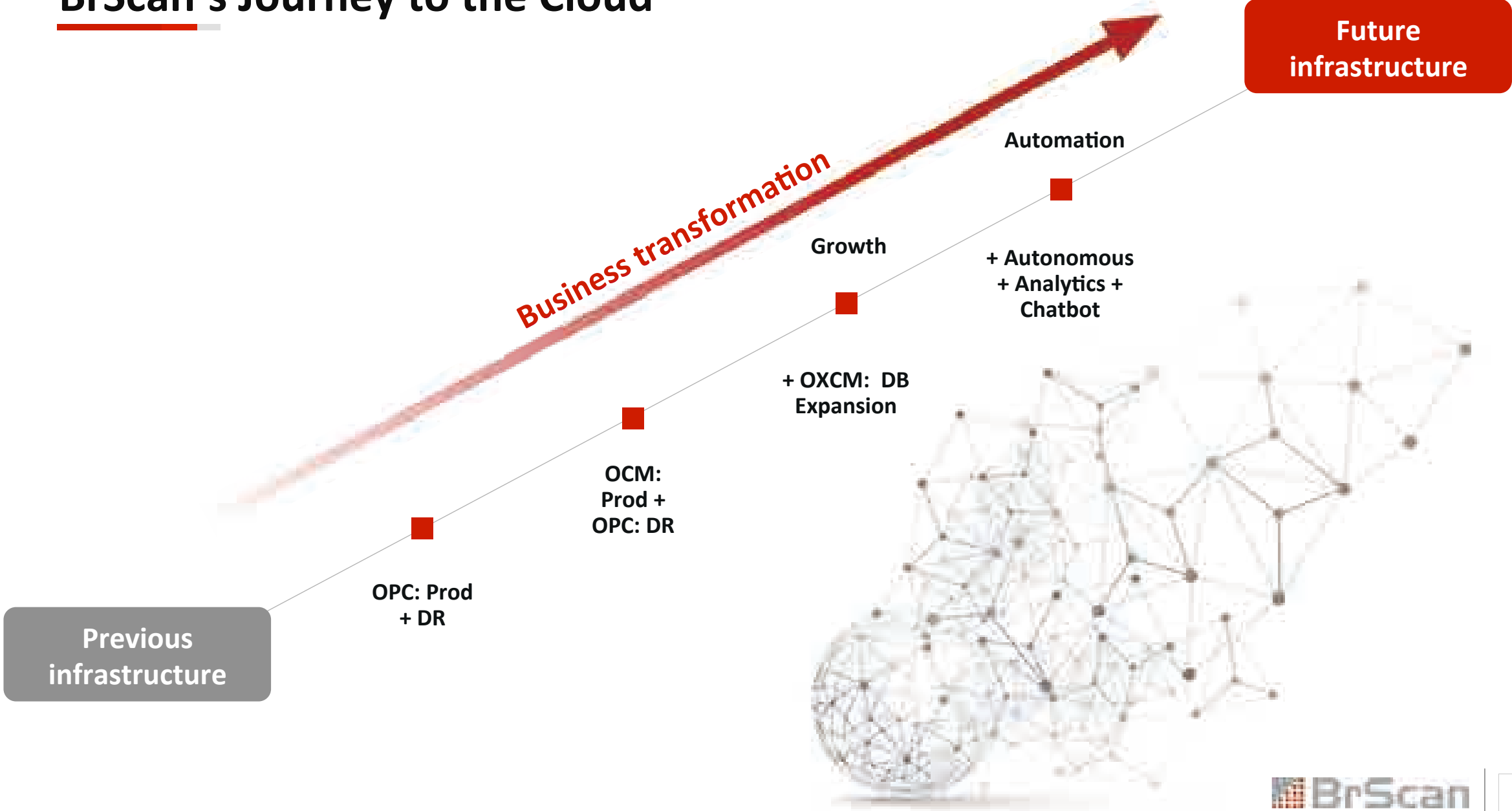
# Maximum Availability Architecture

Enterprise Extreme Performance solution



Enterprise Manager Cloud Control 12c

# BrScan's Journey to the Cloud



# In Summary



**Maximum  
Availability**



**Zero Latency**



**Scalability**



**Instantaneously  
provisioned**



**Real time  
replication**



**Automated DR**



**End-to-end  
security**



**Data stored  
within Brazil**

A stylized illustration of a hand holding a stream of red particles. The hand is rendered in a wireframe, low-poly style, with a greyish tone. From the palm of the hand, a thick stream of small, red, triangular particles flows upwards and to the left, creating a sense of motion and energy. The background is a light, neutral color with some faint, scattered particles.

***Thank You.***



[www.brscan.com.br](http://www.brscan.com.br)