

Fujitsu World Tour 2018

May 30, 2018

FUJITSU

shaping tomorrow with you



#FujitsuWorldTour

Human Centric Innovation Co-creation for Success

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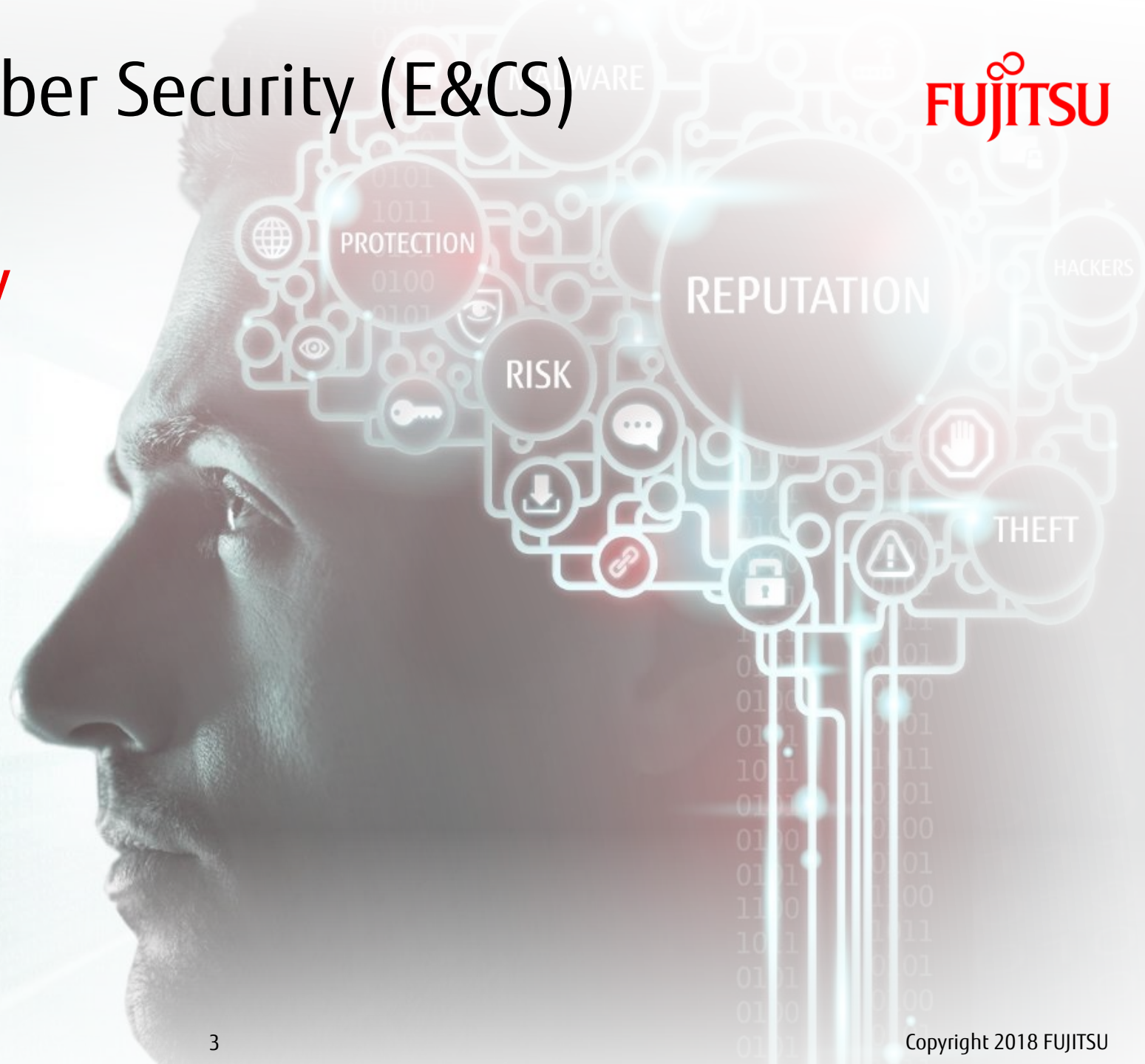
Enterprise & Cyber Security

Advanced Cyber Security with AA and AI

Fujitsu Enterprise & Cyber Security (E&CS)



- » Security Threat Today
- » Fujitsu E&CS
- » Cyber Security with Advance Analytics and AI
- » SAMURAI



Threatscape and Opportunities

Americas
Enterprise and Cyber Security

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Acceleration of Threat Evolution...

...Demands Fundamental Change

User and Entity Behavioral Analytics (UEBA) Market



The need for more adaptive tools leveraging AI and Global Threat Feeds that are capable of evolving at the pace of the threat without defined architectural limitations or scalability issues of past solutions is at an all time high

Threatscape

More than 7 million cyber attacks occur every day.

- Ransomware attacks will cost \$1B this year
- Health care fraud costs the US tens of billions each year. Some put it close to \$100B a year
- There will be 20 billion connected devices by 2020 – all interacting with the cloud
- Virtual sensors resulting from social media sentiment tracking will add exponentially to the multitude of data and complexity
- The global cyber security market will continue to grow and is projected to reach \$202B by 2020

Enterprise Security is Job Security



Utah DTS
Stephen Fletcher



Texas Comptroller
Susan Combs



Target CEO
Gregg Steinhafel



Target CIO
Beth Jacob



Sony Pictures CEO
Amy Pascal

No. 1 Attack Vector: Weak or Compromised Passwords

81%

of Data Breaches are caused
by weak, default, or stolen
passwords

- 2017 Data Breach Industry Forecast

\$7M

Average cost of Data Breaches
in the USA in 2016

- 2016 Ponemon Cost of Data Breach Study

\$2 Trillion

Projected data lost to
Cybercrime by 2019

- Steve Morgan, forbes.com (bit.ly/2pl86mH)

"It takes 20 years to build a reputation
and five minutes to ruin it."

- Warren Buffet



40 Million Credit/Debit
Card Numbers Stolen

SONY

Emails Exposed, Senior
Management Ousted

EQUIFAX

Over 247 Million
Consumers
Data Exposed

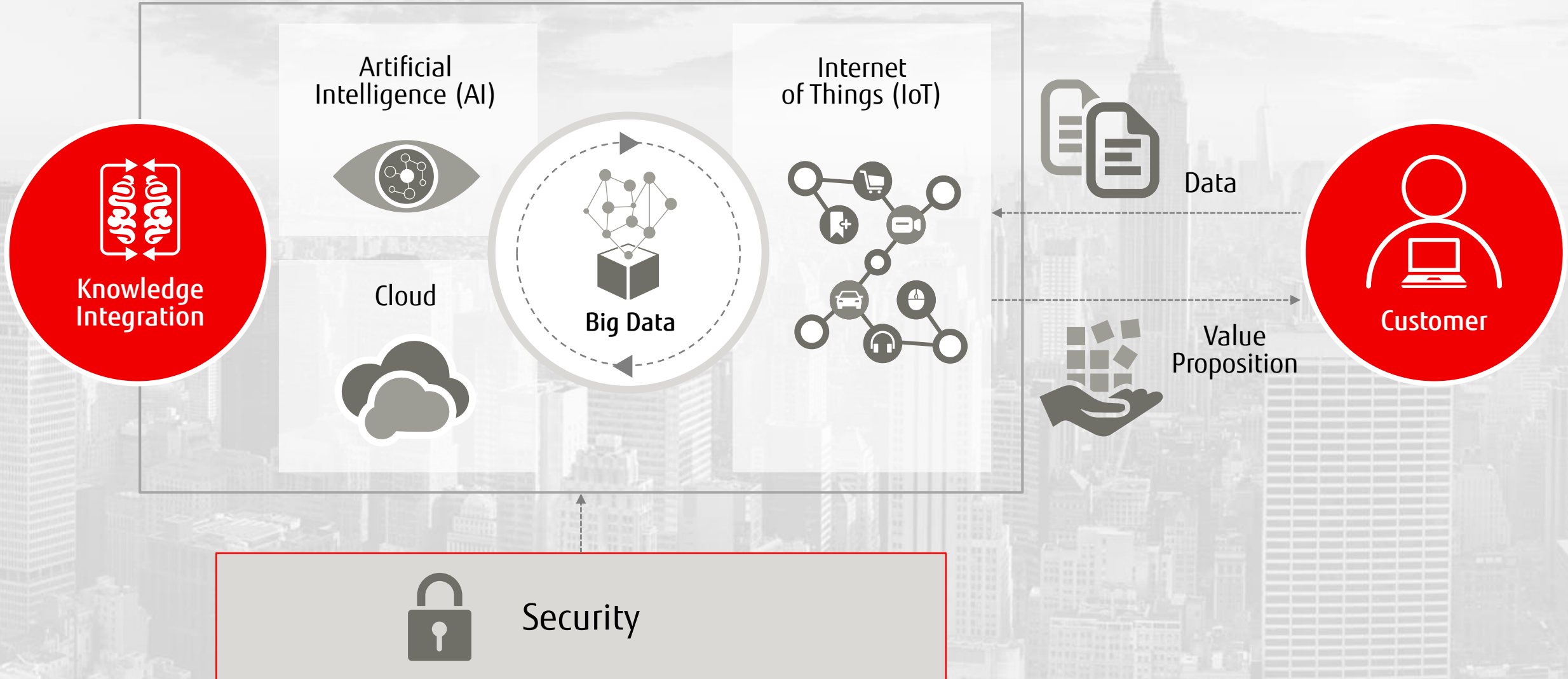
Excellus 

Stolen Identities, Financial
Data, and Clinical Records

JPMorganChase 

76 Million Households,
7 Million Small Businesses
Compromised

Cyber Security is a business necessity today



Connected Security Shield

Enterprise & Cyber Security Portfolio



- Comprehensive portfolio provides security protection across the enterprise
- SIEM is the core for our connected security services and supports each of the four areas for security protection by providing single pane of glass actionable visibility
- Governance surrounds the shield to guide policies and practices to manage risks and ensure compliance to industry standards like PCI, HIPAA, & GDPR
- Customers may choose to benefit from Fujitsu services starting in any one of these six essential security domains
- Fujitsu is able to advise customers by developing roadmaps to immediately address their most urgent cyber-security threats, followed up by build and management services

Fujitsu Americas ECS Key Offerings



ADVISE

Independent, comprehensive reviews of architecture and security controls, including:

- Biometrics Consulting
- Compliance Consulting
- Security Assessment
- Roadmap Development
- Privacy Assessment
- Secure Development Lifecycle
- Data Governance/Data Loss Prevention

BUILD

Customized, business-environmentally sensitive approaches to design and implementation, including:

- Installation and Integration Services
- Network Architecture and Design
- Security Architecture and Design
- Database and Server Hardening

RUN

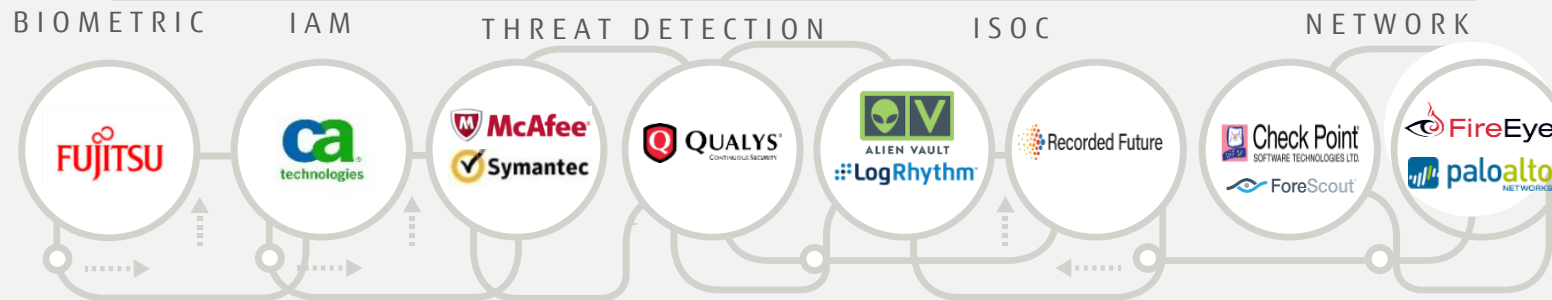
Providing cost effective alternatives for Security as a Service delivered from iSOCs, including:

- Managed SIEM
- Network and Perimeter Security
- Vulnerability Management
- Identity Access Management
- Network Data Loss Prevention
- Endpoint Protection

PRODUCTS/SOLUTIONS

Best of breed integrated solutions from our select vendors, including:

- SAMURAI Platform™
- RoboSOC™ (SOC in a Box)
- Endpoint
 - Anti-Malware/Ransomware
 - Encryption
 - Data Loss Prevention
- Network Access Control (iNetSec)
- Firewalls
- Trusted Identity-as-a-Service™
 - Biometrics-as-a-Service™
 - Security IoT Platform



www.fujitsu.com/us/solutions/business-technology/security/security-services/

Fujitsu Global SOC



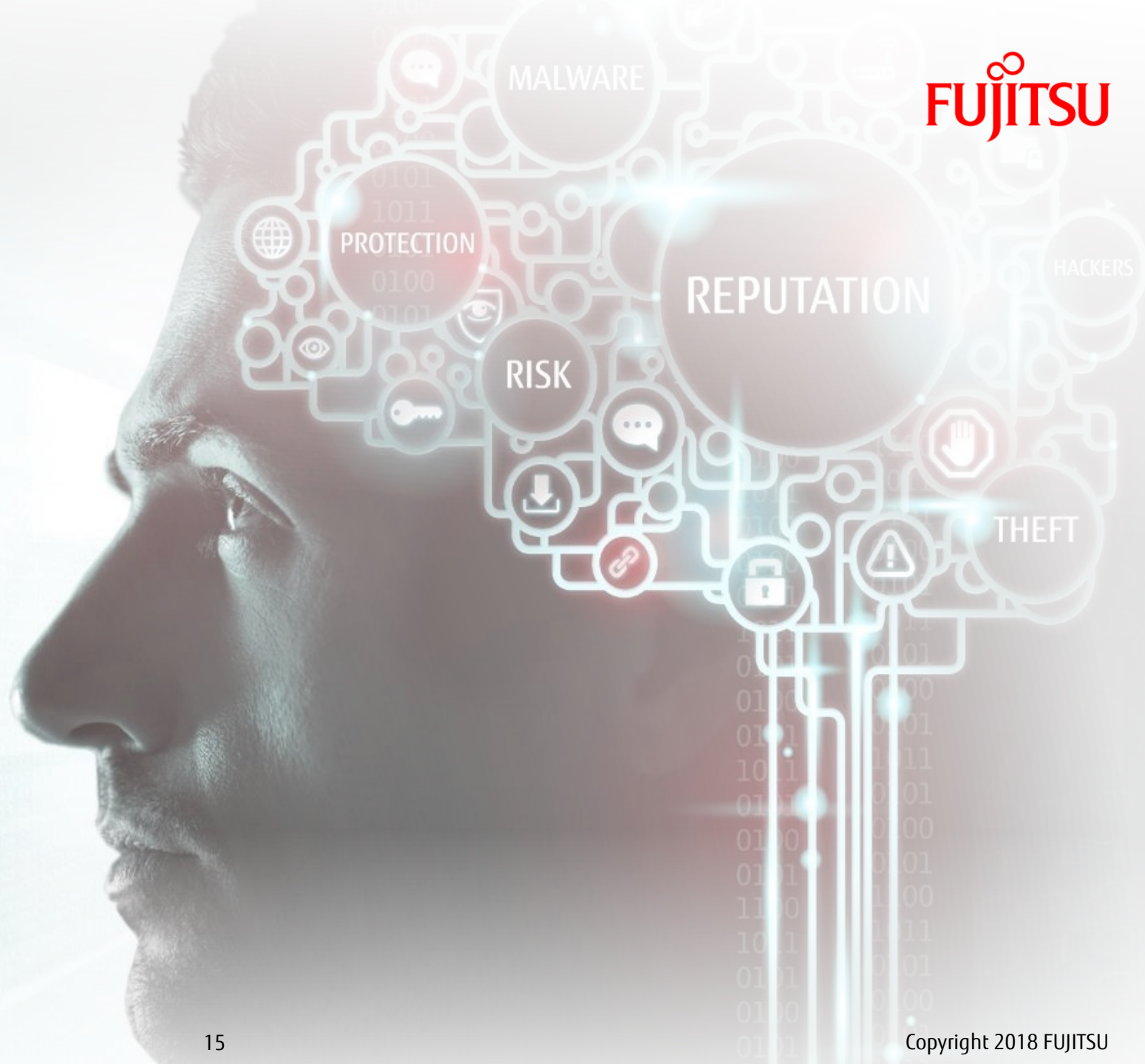
○ SOC

Fujitsu SOC provides Managed Security Services (MSS) globally

Offering Portfolio Intelligent Security Operations Centers

Americas
Enterprise and Cyber Security

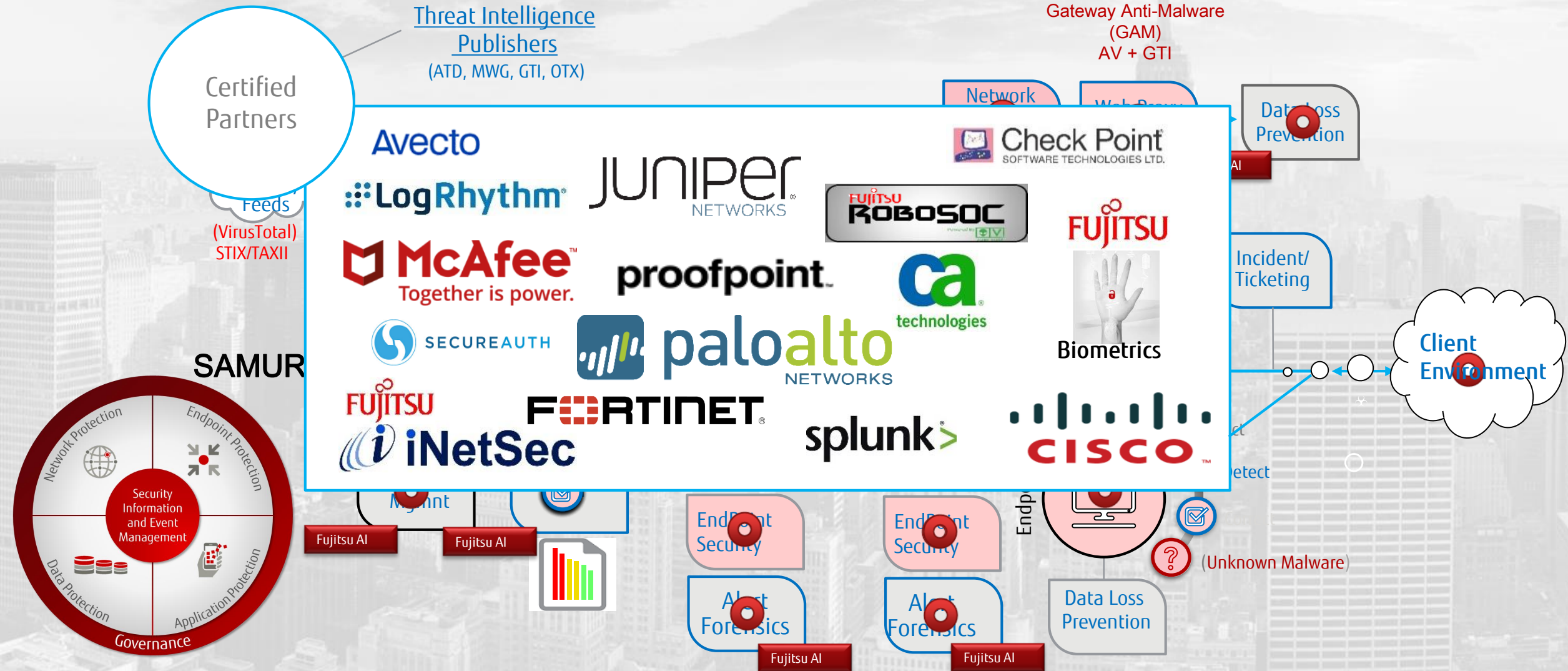
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SAMURAI Platform™ (Protect, Detect, Correct)



Security Advanced Monitoring & Unified Remediation with Artificial Intelligence



Fujitsu Trusted Identity-as-a-Service™ (Trusted IDaaS)



Fujitsu **Trusted Identity-as-a-Service™ (Trusted IDaaS)** is a set of Identity & Access Management offerings to allow the right users with access to the right systems, applications, data and resources (for the right reasons), delivered on an 'as-a-Service' basis.

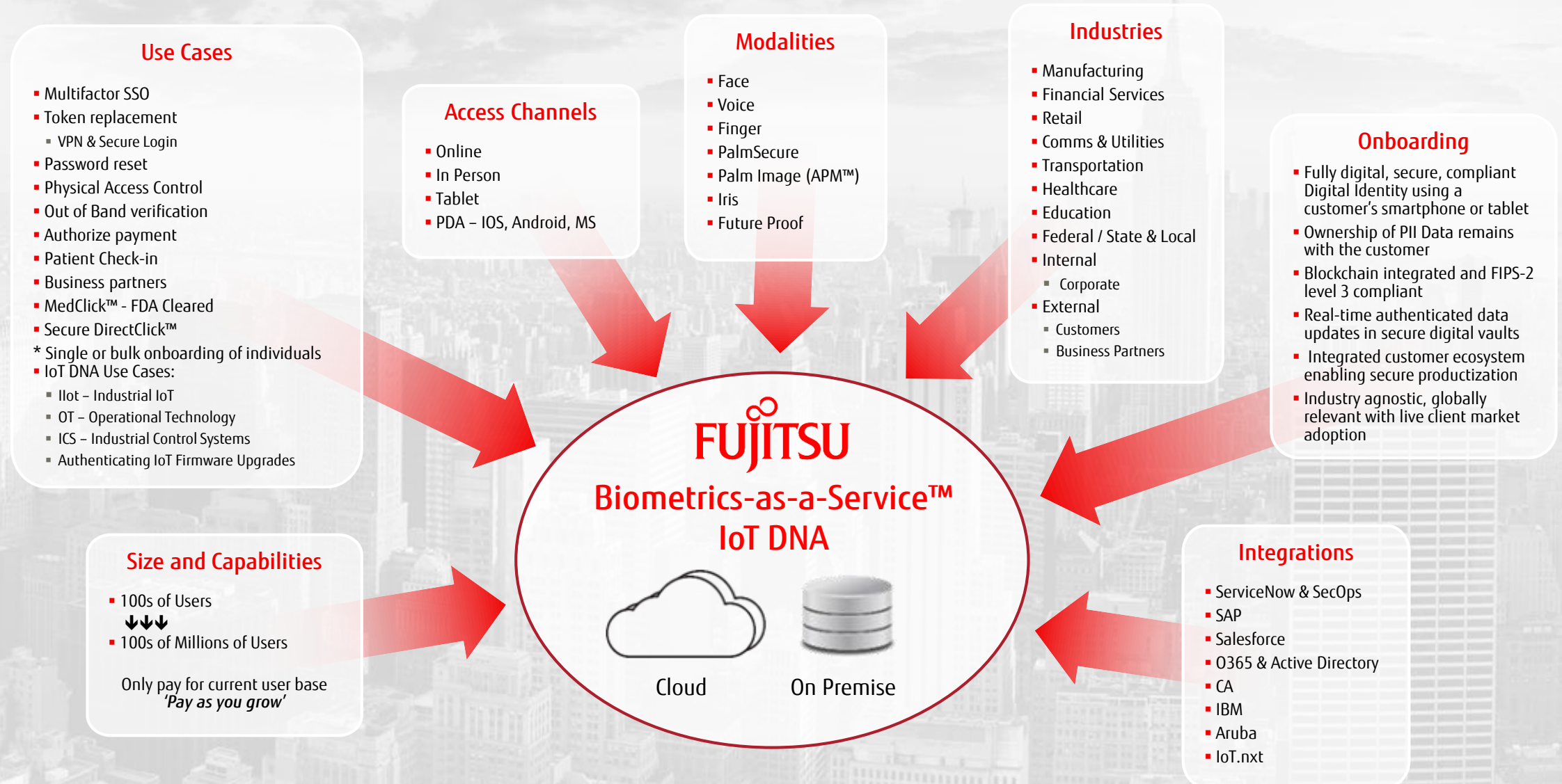
Capable of being hosted in a multi-cloud environment, it enables **convenient access to resources in heterogeneous IT ecosystem**, while alignment with applicable compliance requirements in a context aware manner. This includes multiple features and functions such as:

- Authentication through traditional username / password
- Stronger methods such as Multi-Factor, including Biometric, authentications
- Identity Federation
- Single Sign-On (SSO)
- Identity Lifecycle Management
- Self-Service capabilities including Password Reset
- Identity Management related applications & acceptance workflows

Trusted Identity-as-a-Service™ (Trusted IDaaS) also **supports and secures the next generation "Internet of Things" (IoT) and Machine-to-Machine (M2M) communications** through the establishment of identity for the devices participating in the network.

ECS Americas

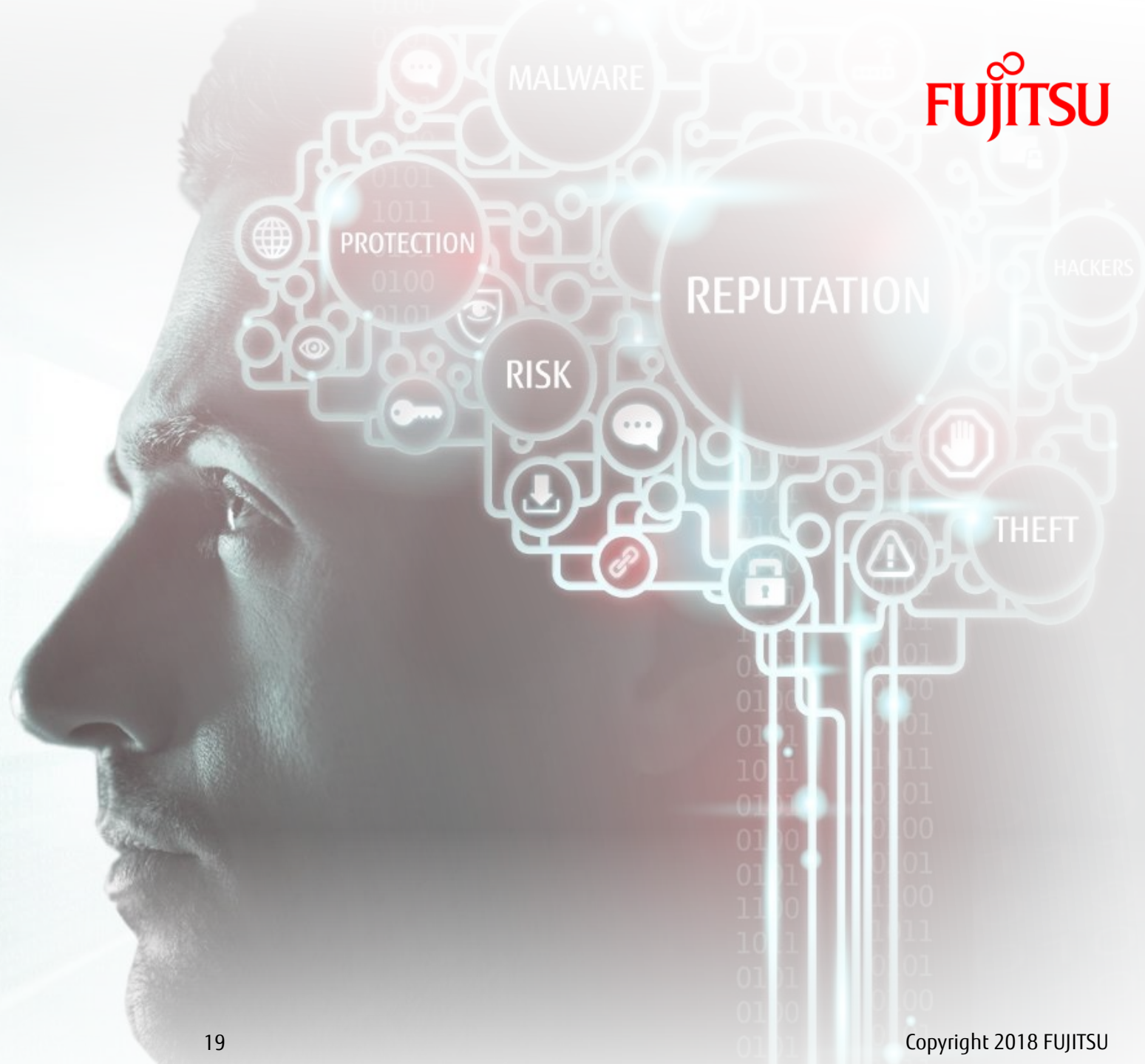
Fujitsu Trusted Identity-as-a-Service™ (Trusted IDaaS)



Offering Portfolio Biometrics- as-a-Service

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Threatscape for Biometrics

The USA has the 3rd highest rate of e-commerce fraud in the world, more than Nigeria*



- The use of stolen card data to pay for merchandise on websites, in mobile apps and by dialing call centers surged 40 percent last year**
- In 2015 alone, \$15 billion was stolen from 13.1 million American consumers**8
- Identity Theft**** Health care fraud costs the United States tens of billions of dollars each year. Some estimates put the figure close to \$100 billion a year
- The typical organization loses a median of 5% of annual revenue to fraud*****

Fujitsu Biometric Offerings



Capabilities to deliver the right solution for each customer

- Biometrics Consulting
 - Biometrics Health Check
 - Product & Performance Evaluation
 - Biometric selection
 - Architectural Assistance
- Systems Integration
- Hosting and Cloud Services
 - Biometrics as a Service (BIOaaS)
- Products
 - Fujitsu & Trusted Partners

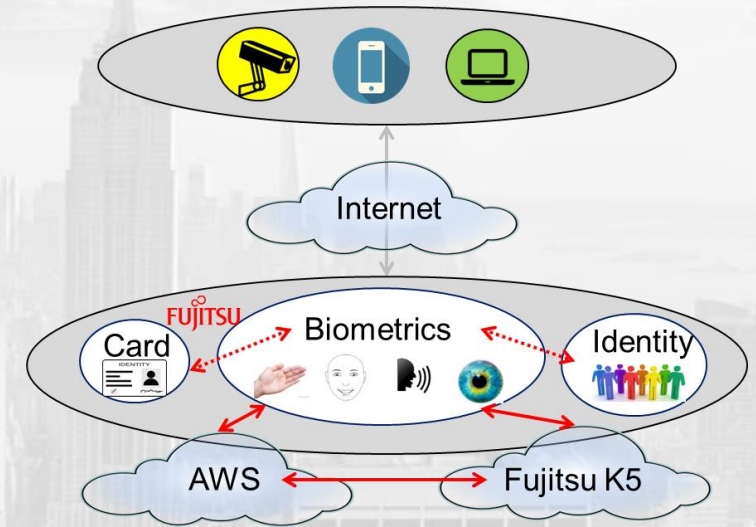


Cloud-based Biometrics-as-a-Service™



The Fujitsu multi-modal Biometrics as a Service is a massively scalable secure solution that is capable of running in a variety of ways:

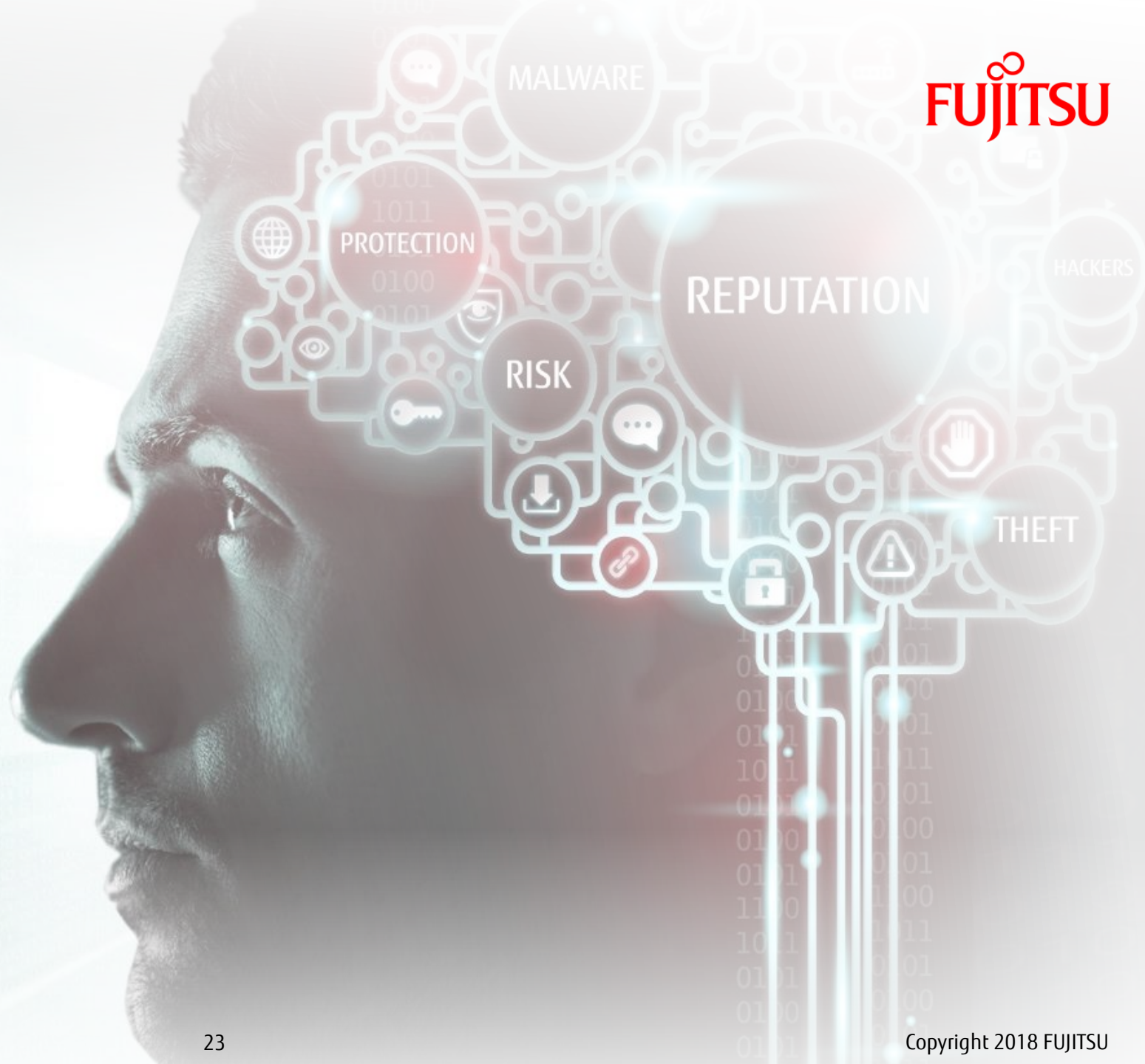
- Complete Identity Management as a Service
 - Securely store all Biometric and Biographic information in the cloud
- Anonymous Biometrics as a Service
 - No Personally Identifiable Information (PII) leaves the organization
- Anonymous Biometrics matching service
 - All information is stored in house and only the Biometrics being matched are sent to the cloud
- Flexible design to integrate new Biometrics technologies
 - New biometrics can be added to existing identities



Offering Portfolio Secure DirectClick™

Americas
Enterprise and Cyber Security

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Secure DirectClick™ High-Level Overview



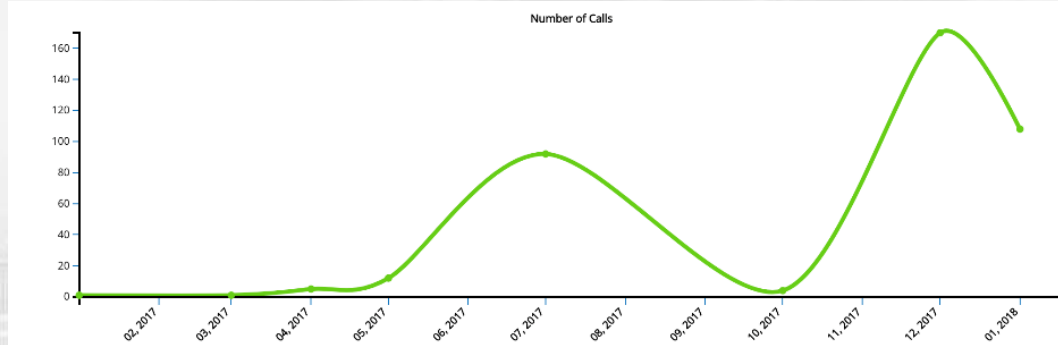
Embedded encrypted instant communication and data transfer solution for enterprise grade contact centers, help desk and sales / marketing organizations

- The user clicks and is securely connected to the desired end-point
- **Patented Visual Directory** allows user to select from various contacts and/or departments
- Communications are initiated right within the browser or application
- No plugins or software downloads required
- Uses 256-bit encryption key over Secure Sockets Layer (SSL) and Transport Layer Security (TLS)
- Utilize **Analytics Platform** to Drive Business Performance



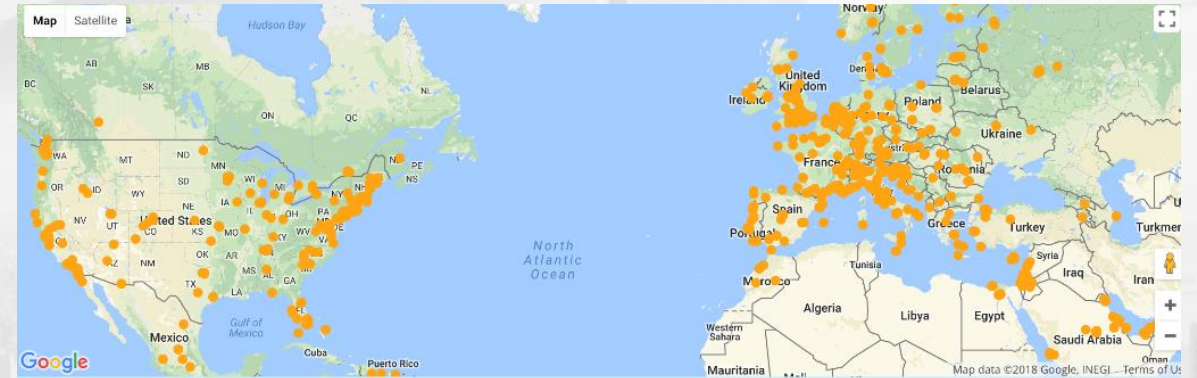
- One click launches a patented visual directory
- Call desired department directly, from any device

Back End Data Analytics



Fast Facts

Avg Calls/Day:	1.0	Peak Hour:	5:00 EST
Mobile:Web Ratio:	3.57:1	Avg Call Length (mins):	0:24
Successful Calls:	162	First Time Callers:	202
Total Calls:	393	Avg WoW Call Growth:	841.92 %



Fast Facts

Avg Calls/Day:	2.7	Peak Hour:	5:00 EST
Mobile:Web Ratio:	1:8.84	Avg Call Length (mins):	3:54
Successful Calls:	2607	First Time Callers:	3049
Total Calls:	3049	Avg WoW Call Growth:	364.86 %

Data capture and analytics for improved business decisions and customer care

- SDC captures and displays data about the caller in real time
- Session information and data can be used to understand customer concerns and optimize customer service
- Solution can be integrated into your CRM system to leverage existing customer profiles for faster, personalized service and improved marketing / sales lead generation

Customer Success Example: *Retail Company*



Before

8YY # Inventory: **36+**

Avg. per minute cost: **\$0.3027**

Global reach: **84 countries**

AHT: **30+ minute average**

After

Single universal button

\$0.0175/min (**94% reduction**)

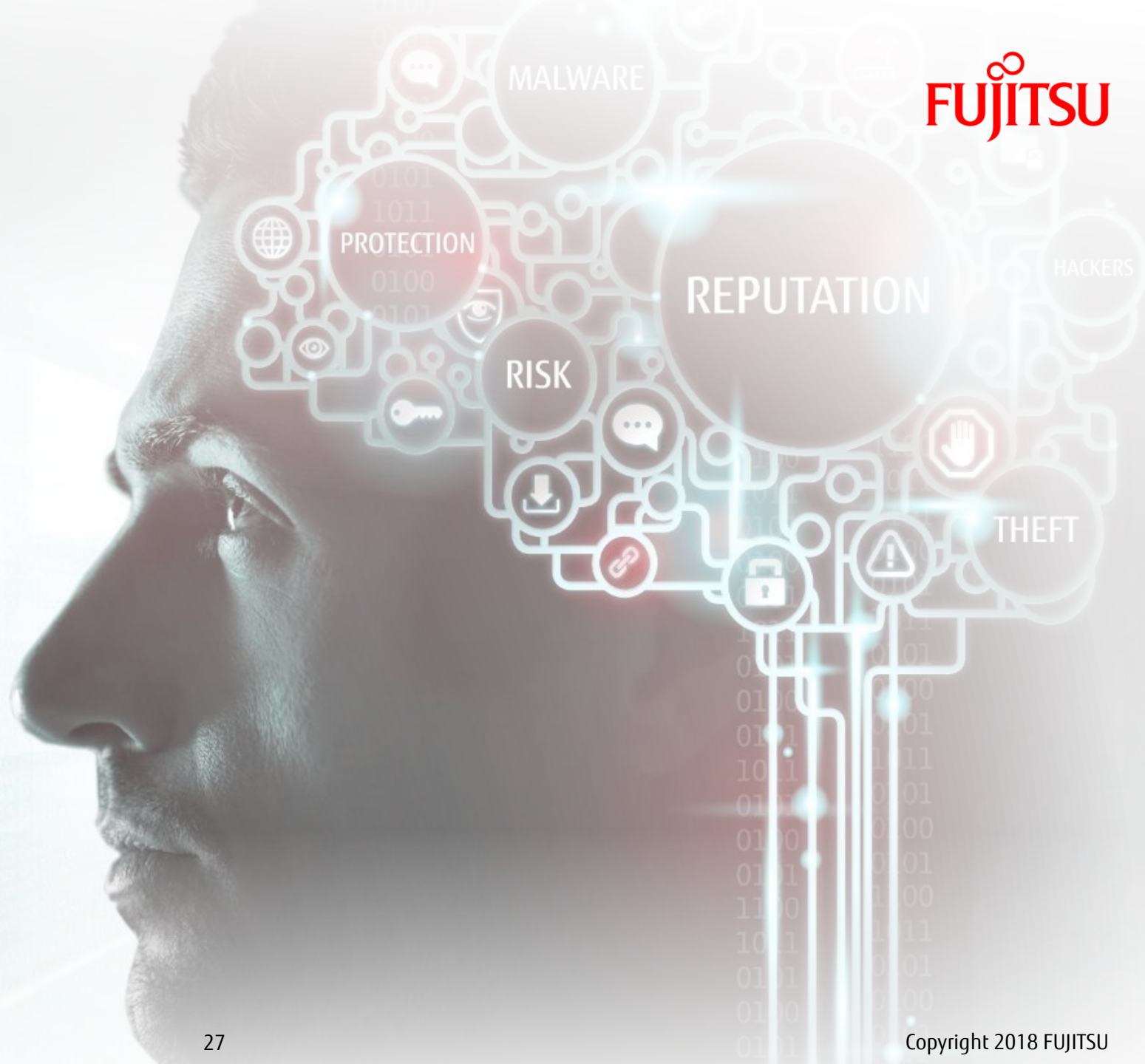
195 countries (**2.3X more penetration**)

Avg. 3-6 minutes (**80% reduction**)

Offering Portfolio Securing the Enterprise using IoT DNA and Biometrics as a Service

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What is IoT DNA?

The Internet of things (IoT) is the network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors, actuators, and connectivity which enables these object to connect and exchange data.

Each thing is **uniquely identifiable** through its embedded computing system but is able to inter-operate within the existing internet infrastructure. - *Wikipedia*

IoT DNA is the *unique signature* of an IoT device that can be used to identify that device as it is connected to the enterprise. Each IoT device has a set of unique characteristics and identifiers that make up its DNA.

✓ What is OT ?



OT Systems Examples

- Supervisory Control and Data Acquisition (SCADA)
- Process Control Networks (PCN)
- Distributed Control Systems (DCS)
- Manufacturing Execution Systems (MES)
- Telematics
- Robotics
- Facilities Management/Building Automation Systems
- Fleet Management Systems

[1] <https://www.gartner.com/doc/3786163/market-guide-operational-technology-security>

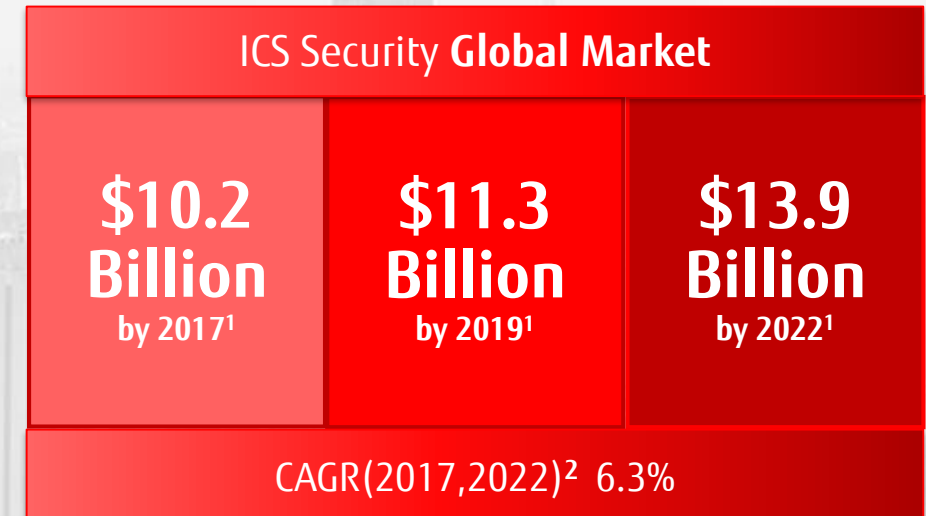
✓ Targeted OT/ICS market

IoT has a broader meaning and our target is possible subjects of managed service, such as IIoT(Industrial IoT), OT(Operational Technology) or ICS(Industrial Control System).

What Role will IoT Play in Enterprise Security?

- Examples include:
 - IIoT – Industrial IoT
 - OT – Operational Technology
 - ICS – Industrial Control Systems
- How do you identify the devices on the Enterprise network?
- How do you identify who has permission to use them?

Market forecast from 2017 to 2022



<http://www.marketsandmarkets.com/PressReleases/industrial-control-systems-security-ics.asp>

<https://www.gartner.com/doc/3840570/forecast-analysis-information-security-worldwide>

IoT DNA and Biometric Authentication

■ Use Cases

- Dynamically identifying devices that connect to the Enterprise
- IoT to IoT – authenticating devices that talk to each other
- User to IoT – users that have permission to interact with IoT device(s)

■ Platform Requirements

- Biometrics as a Service - supports both IoT DNA and user identification and authentication
- IoT.nxt, ZinBox or equivalent – supports IoT protocol integration



Fujitsu Incident Resolution

AA and AI Maturity Model and Vision



Incident Resolution all handled by AI

- AI respond to known and unknown incident types
- AI automatically creates response process and automated steps

Humans only for exception cases

Machine Assisted Automation Development

- Machine assist in developing response process and automated steps (validation, triage)

New automations more quickly

Machine Learning Incident Handling

- ML classification of incident types and associated response process and steps
- Automated handling of unknown types based on previous experience

Handle new scenarios automatically

Machine Assisted Incident Resolution

- Intelligent recommendations based on learning user-behavior and analytics
- Automated decisions on statistical probabilities from results and user-behavior

Respond faster and more accurately

Advanced Incident Resolution Analytics

- What incident types to automate next
- What response process to automate
- What decision tree process to optimize

Where to invest the time and effort

Fujitsu Advanced Analytics & Artificial Intelligence (AA and AI)



The Fujitsu AA and AI platform, at its core, is a problem-solving enterprise automation solution focused on Machine Reasoning and Machine Learning.

With our AA and AI offering we enable a fundamental shift in your organization on the following four areas:

- **Reduced Cost** - Automation has been proven to bring in at least 50% cost savings on the processes it touches and yields recovery of 25-40% of the entire IT operating budget
- **Improved Efficiency** - Automating with Fujitsu AA and AI results in reduction of processing time with an average of less than 3 minutes
- **Graphed Data** - Data availability creates many opportunities for optimizing business which are dependent on indexing atomic information
- **Designed for Change** - The Fujitsu AA and AI platform can manage legacy systems, adapt with modernization and leverage knowledge through change

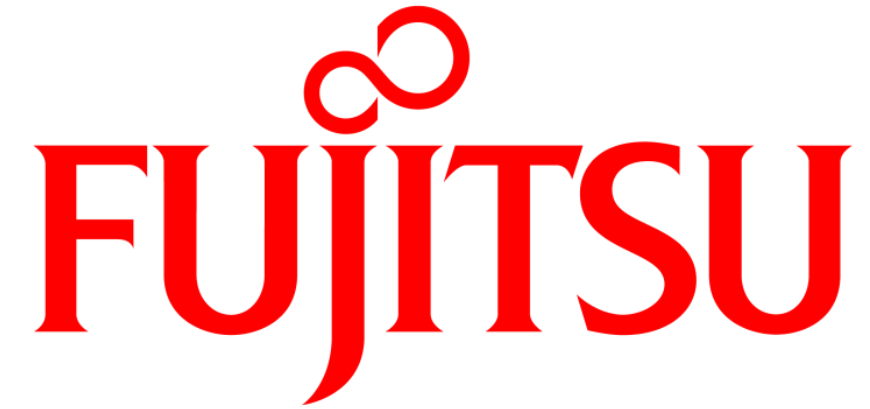
To contact the Fujitsu Security Team:



Telephone: 800.831.3183 or 408.746.6000

Website: www.fujitsu.com/us





shaping tomorrow with you

Secure DirectClick™ for VoIP protection



Secure DirectClick Enables Customers to Securely Contact Businesses from any Internet-connected Device

What is Secure DirectClick™?

- Patent-protected cloud telephony solution that enables **secure and free global communication**
- Businesses place secure, instant call buttons on their website, app, or any digital touchpoint
- Unlike Skype, WhatsApp, Facebook Messenger etc., there are no logins, plugins, or software downloads required – **customers just click and connect!**
- Captures real-time data about each inbound call such as IP address, call initiation source, website session ID, cart information, call duration and much more
- Managed through a self-admin panel from which users can generate call buttons within minutes

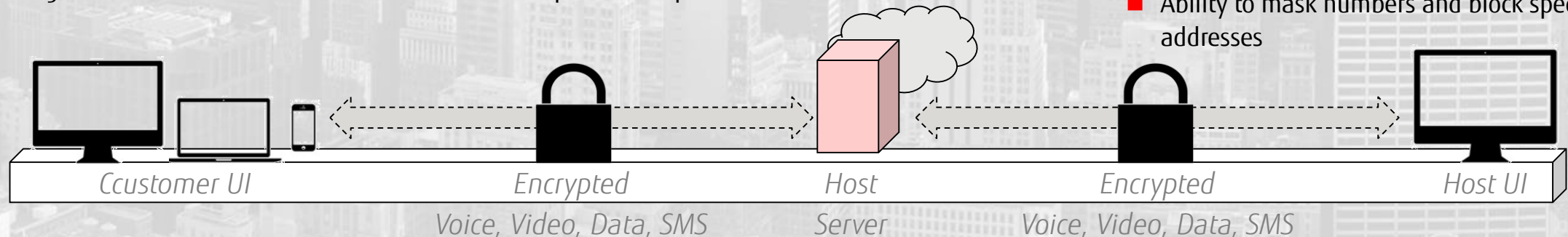
What can it do?

- Securely ties together voice, video, messaging, and data
- Works with any existing phone system (SIP or PSTN) with no development work/knowledge required (unlike Twilio)
- Integrates with the business's contact management system to leverage customer profiles for superior service
- Geo-location and smart call routing available to route to specific reps or locations based on customizable set of criteria
- Patented visual directory feature allows users to navigate to specific rep, department, location or specific end-point for more direct contact

FUJITSU Secure DirectClick™ is a completely secure, embedded calling solution that enables encrypted, instant communication and data transfer through any website or mobile application.

Security

- VoIP calls are placed through secure WebRTC channels to any phone number of business' choosing, anywhere in the world
- FUJITSU Secure DirectClick™ uses 256-bit encrypted key over SSL and TLS while leveraging an additional 128-bit encryption for browser-based communication to provide secure voice and data transmission
- Ability to mask numbers and block specific IP addresses

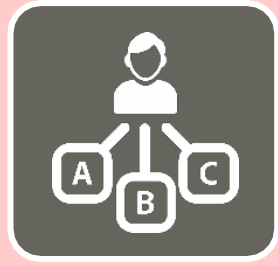


The Fujitsu Difference with AA and AI



Unified Incident Response Experience

Single pane of glass for all Incident Response tasks, investigations, processes, automation and notes.



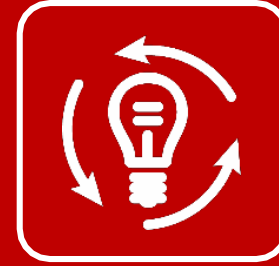
Process Orchestration

Consistent and standards-based process guidance, decision trees and instructions based via SAMURAI™



Automation

Powerful human-guided automation and end-to-end automation to automate incrementally and pragmatically.



Playbooks and Automations

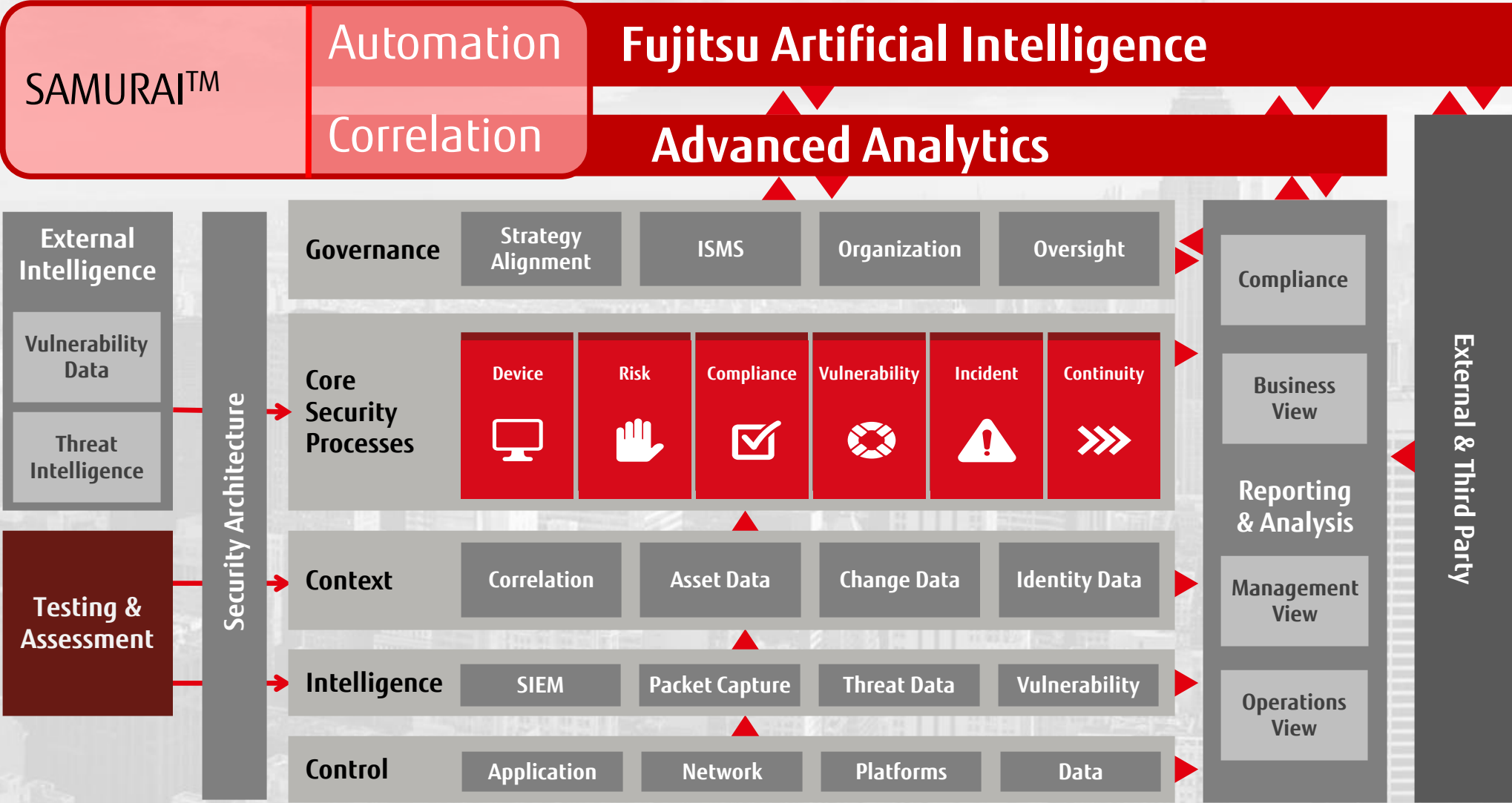
Prebuilt processes and automations with most common security and IT systems and "no code" automation design tools.



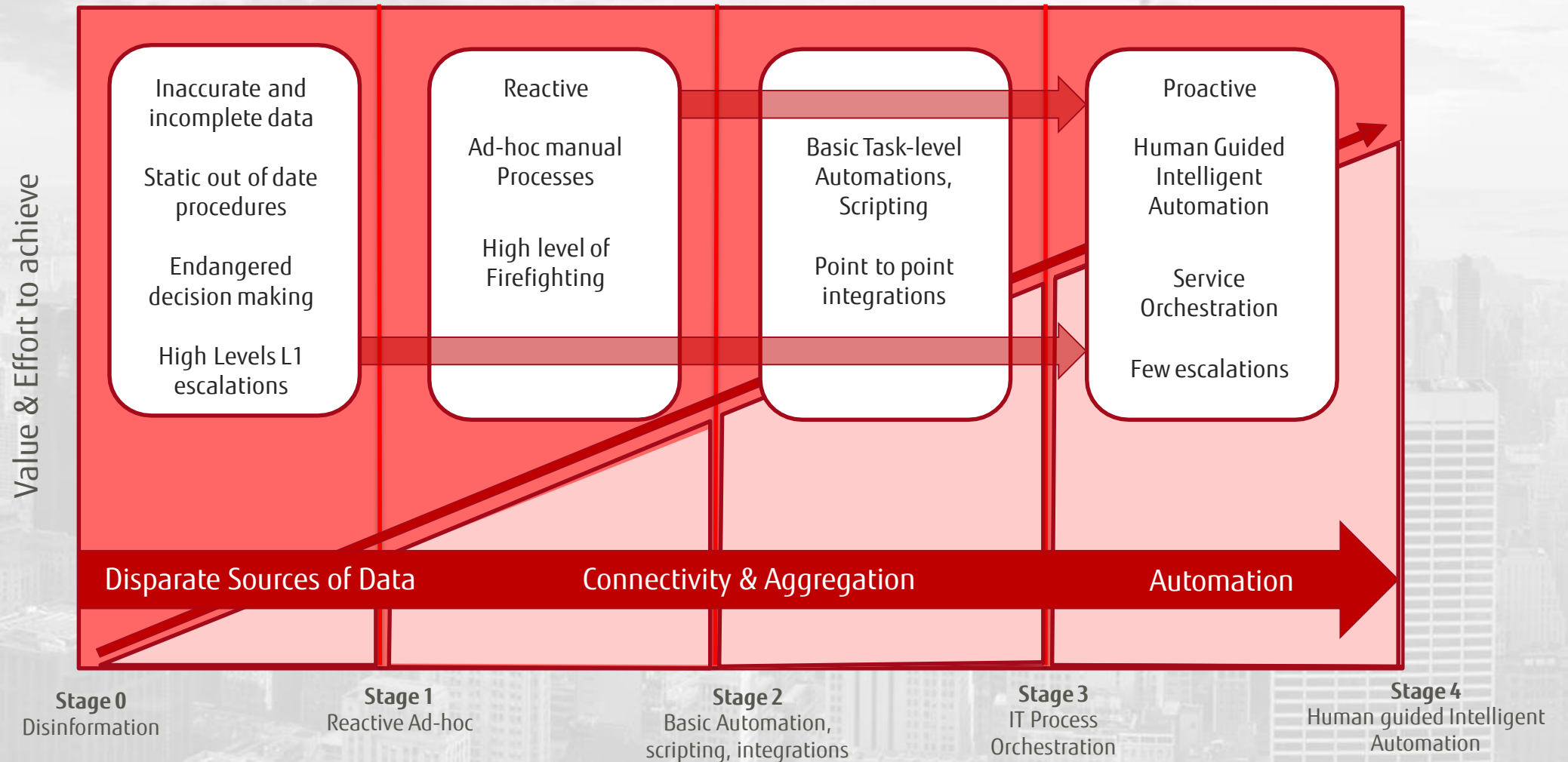
Enterprise-Class Capabilities

Scalable, redundant and available on-premise or in the cloud with proven success in the most complex and largest organizations.

Fujitsu Security Operating Model with AA and AI



Fujitsu Maturity Model



Next Generation iSOC using Advanced Analytics & Artificial Intelligence for Cyber Security

Automating iSOC operations through Advanced Analytics and Artificial Intelligence providing a 360° view of your environment

Next Generation iSOC: Fujitsu SAMURAI™ Platform



Security Advanced Monitoring and Unified Remediation with Artificial Intelligence

The Solution

- Breaking silos by automating and reusing knowledge around vulnerabilities and exploits on all layers of the IT stack
- Machine Learning End-to-End SIEM platform focusing on analysis, remediation and human/machine collaboration
- Operates in a Multi-Tenant, Legacy, Cloud and/or Hybrid environment while built to support IoT
- Pattern recognition engine enabling a proactive approach to security management

Key AI enabled functions

- Real time monitoring & management
 - Logs, response and remediation
- Reporting and a consolidated view
 - Security analysts & professionals knowledge retained and leveraged, all via our AI platform
- After- Action Analysis
 - AA and AI backed forensics and investigation

We grow as you continue to grow

- No vendor lock in as an open the API enables you to integrate into the platform as you grow
- Bridge the gap on IT modernization as we support your legacy services and newer services across all IT layers to enable agility
- Consistent quality levels that enhance your path to compliance and reduce risk

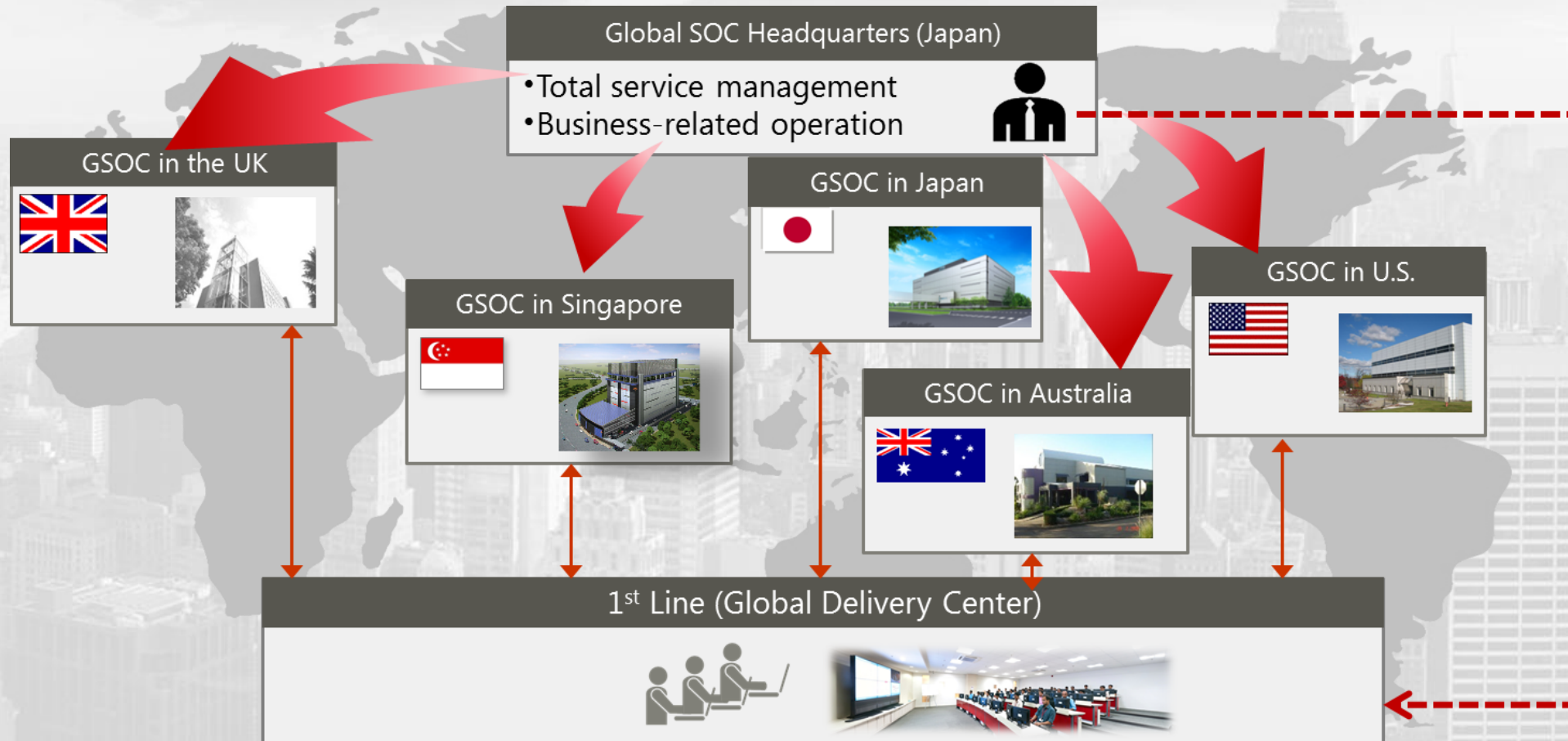


Fujitsu E&CS Standard Security Offerings

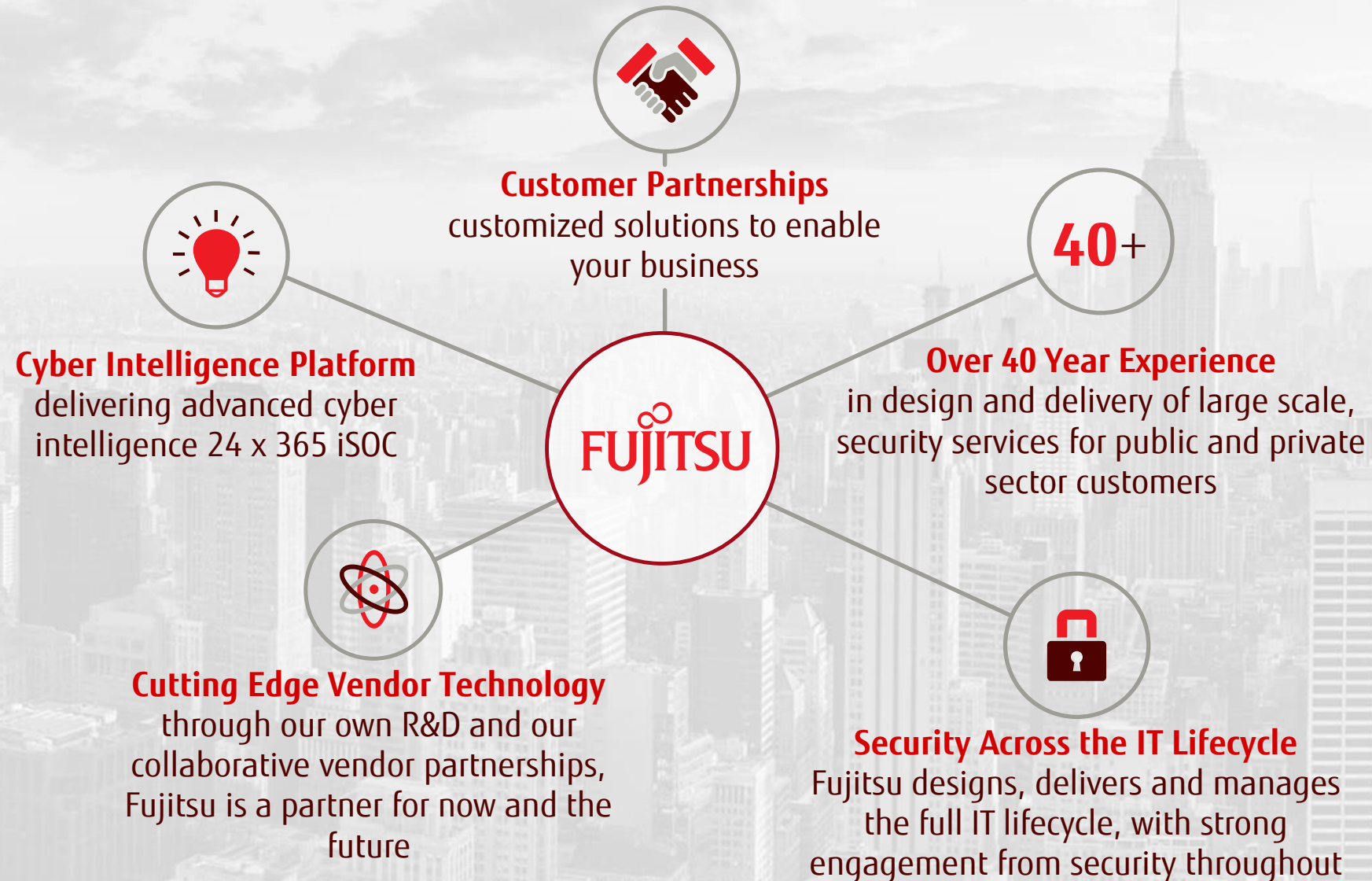
Fujitsu offers a full spectrum of standard Cyber and Network Security offerings



Fujitsu Global Security



What Makes Us Different



FAI Security Offerings



ADVISE

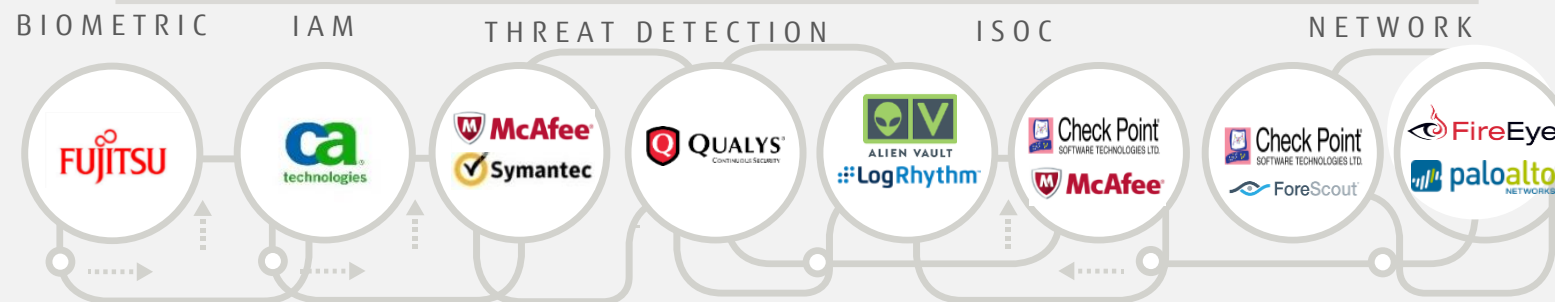
- Compliance Consulting
- Security Assessment
- Roadmap Development
- BC/DR Review, Design

BUILD

- Endpoint Protection – Anti-Malware
- Endpoint Encryption
- VPN Services
- Intrusion Prevention & Detection (IDS/IPS)
- Endpoint Data Loss Prevention
- Web Content and URL Filtering
- Data Encryption and Key Management
- Advanced Threat Detection and Protection
- Cloud Access Security Broker (CASB)

RUN

- Managed iSOC Services
- Security Information and Event Management (SIEM)
- Firewall Management Services
- Vulnerability Management
- Identity Access Management (IDAM)
- Penetration Tests
- Threat Intelligence
- Network Access Control (NAC)
- Web Application Scanning
- Security Incident Response and Forensics



Fujitsu Advanced Analytics & Artificial Intelligence

Fujitsu take an agnostic approach to integrating our AA and AI capability with security platform vendors



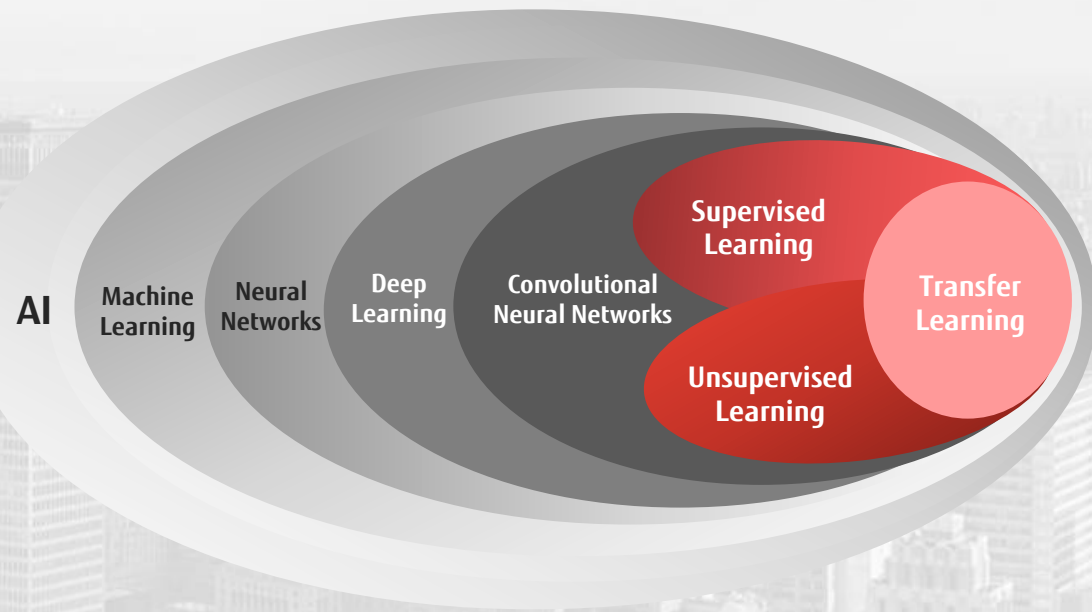
Fujitsu Advanced Analytics & Artificial Intelligence



Fujitsu Advanced Analytics and Artificial intelligence (AA and AI)



ArcSight
An HP Company



LogRhythm

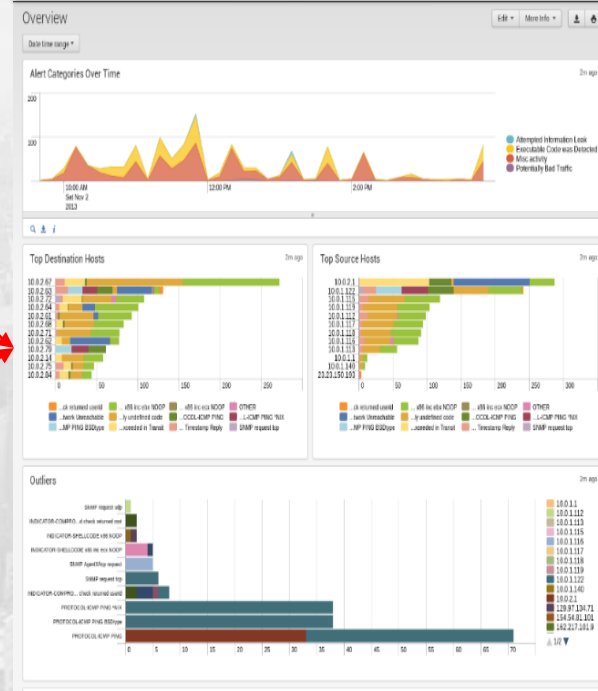
splunk

Radar

McAfee



Fujitsu AI (Artificial intelligence) Manager of Managers™



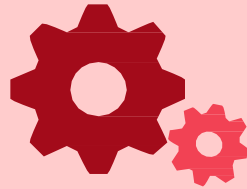
Within Fujitsu AI:

- Single Pane of Glass via multiple SIEM sources
- Common and complex problem solving automation and necessary action to Fujitsu events
- Machine to Machine interaction with limited to no human intervention
- Resolution consistency via automation
- 90% manual interaction reduction on resolutions via automation

Current-State Security Operations Challenges



Too many
events



Ad hoc response
Process /
coordination



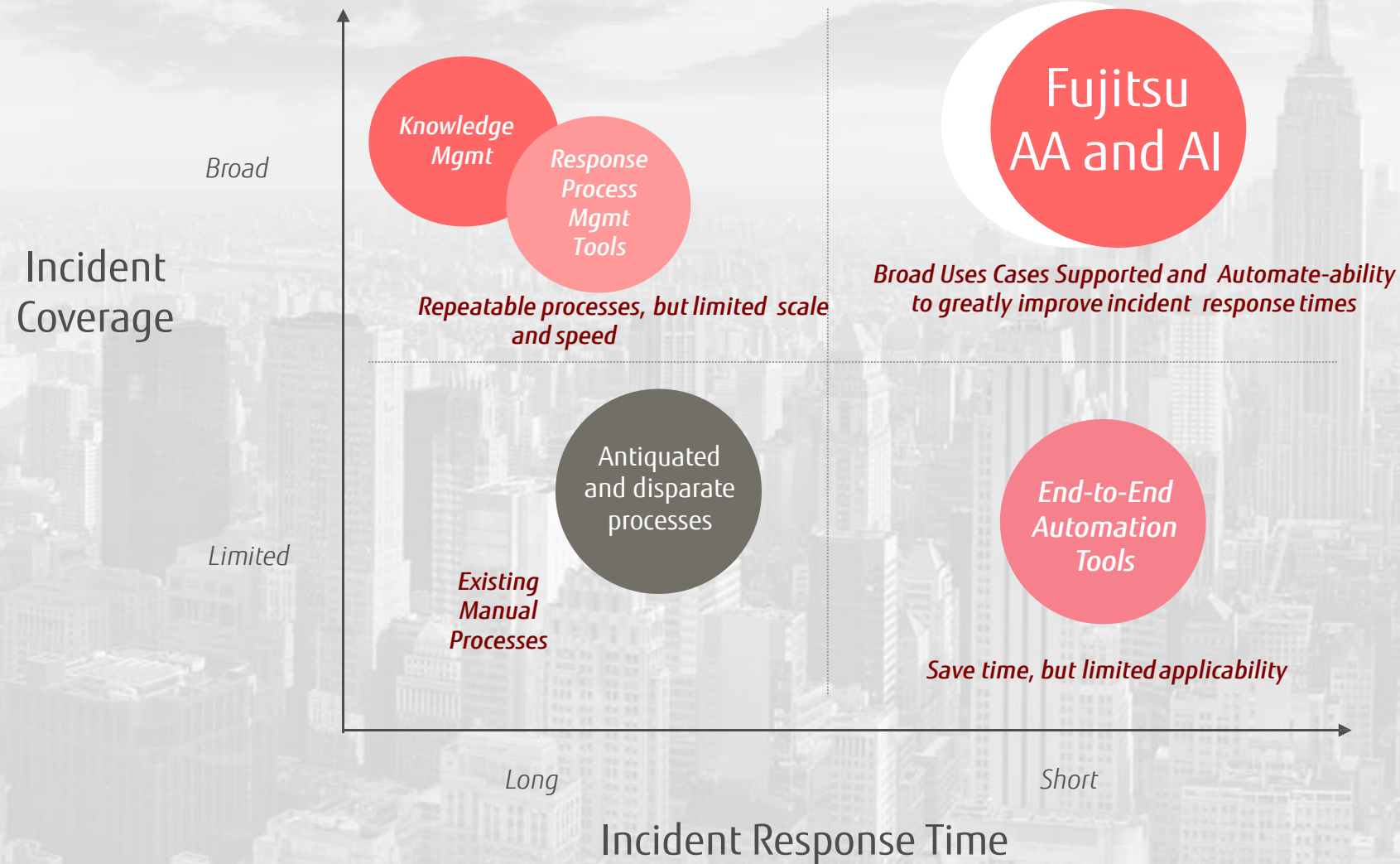
Antiquated /
manual tools



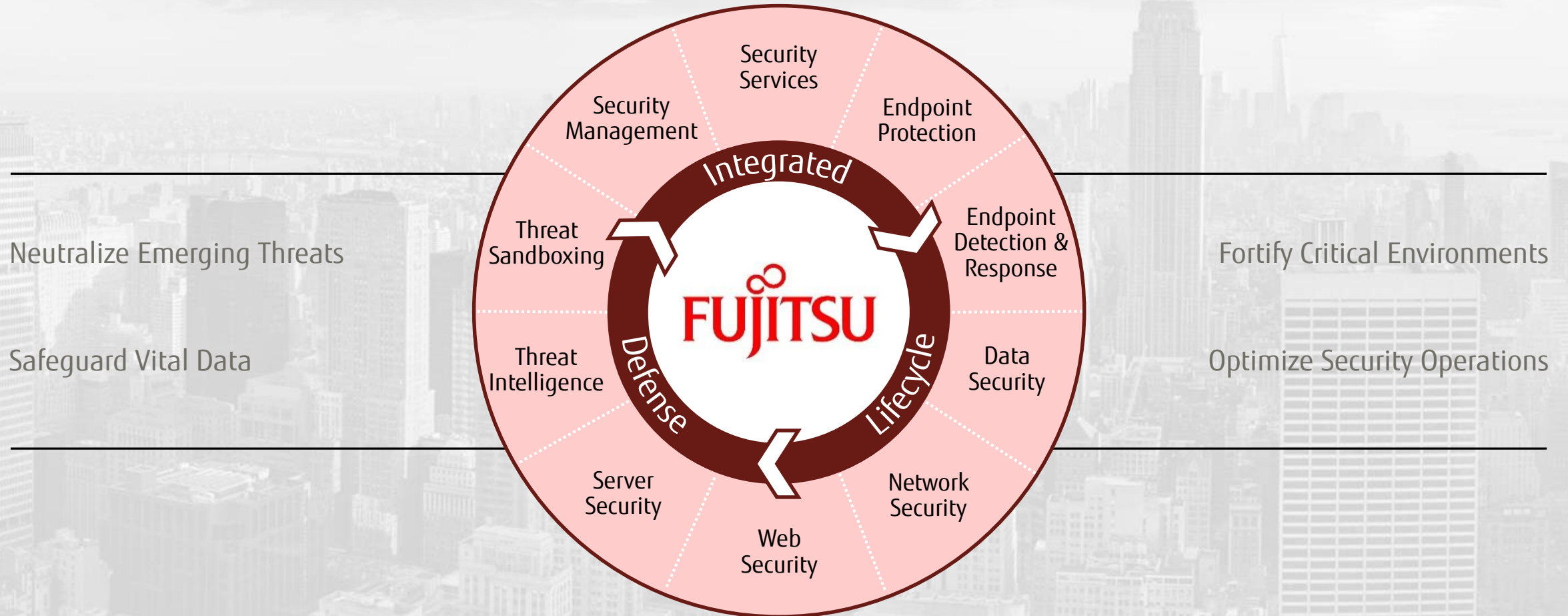
Skills
Shortage
Alert Fatigue

Unsustainable operations and increasing risk profile

Security Incident Response Landscape



Fujitsu Security: SAMURAI™ Capability Offerings

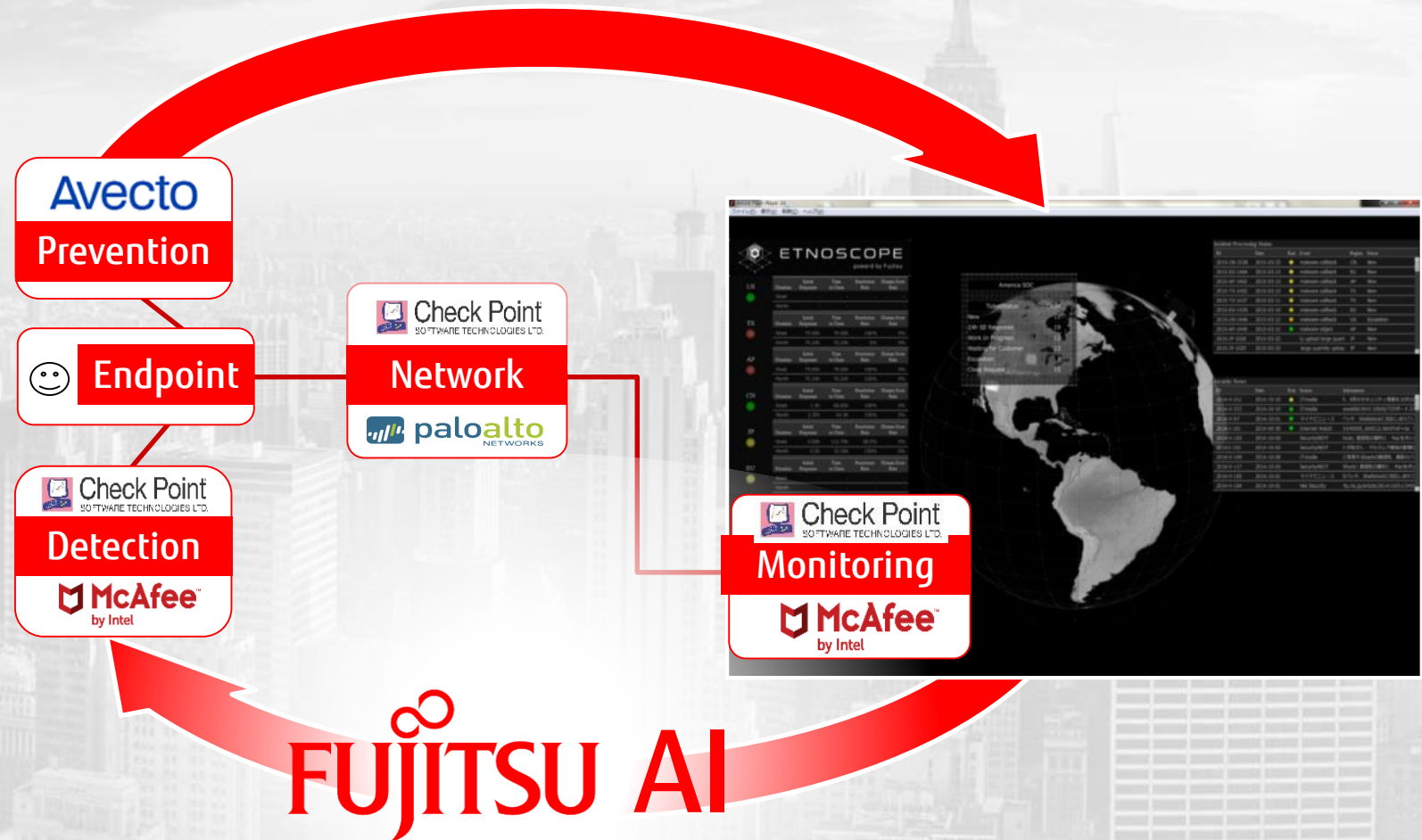


FAI Enterprise & Cyber Security (E&CS) Unified Monitoring and Event Management Platform



Within Fujitsu AA and AI

- Single Pane of Glass via multiple SIEM sources
- Common and complex problem solving automation and necessary action to resolve events
- Machine to Machine interaction with limited to no human intervention
- Resolution consistency via automation
- 90% manual interaction reduction on resolutions via automation



Agenda

- Introductions & Objectives
- Fujitsu Cyber Security
 - Current and desired situation
 - Our understanding of your business
- Fujitsu Systems
 - What we do, how we do that
 - Demonstrations
- Fujitsu & Fujitsu
- Methodology and approach
- Next steps

Add to agenda format on slide 2 above...need clarification on what we want the agenda to be

- Fujitsu Artificial Intelligence based Cyber Security
- Next Generation iSOC using Artificial Intelligence
- Open Source "SOC in a Box" using Open Stack
- Biometrics Based Security
- Closing Statements / Q&A

Our understanding of your business



Corporate objectives

- Increasing profitability
- Extending competitive lead and accelerating growth
- Delivering customers business value and results – Advanced security ensuring business continuity

Key strategies

- No
 - M
 - M
- customers
for pro-active mitigation – getting ahead of the threat curve

Key initiatives

- Ac
 - U
 - Increased security through biometrics
 - Integration of threat intelligence for immediate threat context - bringing in AI/ML for predictive analysis
 - Enhancing service model/operations for improved, pro-active response
- reat Centers

Key success factors and challenges

- The ability to:
- Support accelerated growth AND varying demand, real-time and at pace across wide toolset and operations
 - Put the human at the center of it all, maintaining control, focusing collective brainpower
 - Deliver accelerated resolution of all types of incidents with lower cost and/or less resources
 - Remove laborious, repetitive, manual tasks by automating incident and event handling, analysis, diagnostics and triage
 - Break down silos, share collective knowledge and enable operational staff to automate processes quickly and effectively

How Fujitsu can help

- Fujitsu will:
- Connect disparate tools into an ecosystem accelerating security incident resolution across technologies and operations
 - Act as your digital agent workforce, improving productivity and reducing escalations at no or reduced headcount
 - Allow you to become proactive and improving security levels whilst maintaining operations and reducing downtime/impact
 - Enable you to model, standardize and shift incident mitigation left whilst maintaining control and compliance
 - Empower process owners to model and share specialist knowledge to turn first-call-responders into Fujitsu

Jason not sure if you
want this but added for
your review

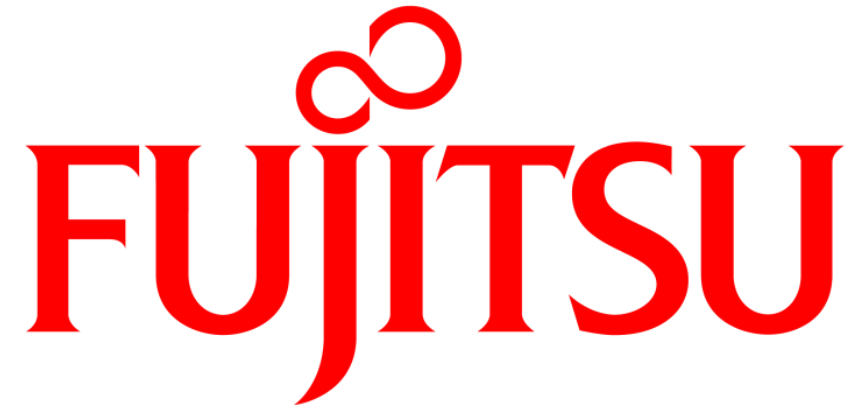
FAI Enterprise and Cyber Security (E&CS) "Threatscape"



There are over 7 million cyber attacks taking place daily.*



- Ransomware** According to ZDNet, the cost of ransomware attacks: \$1 billion this year
- Identity Theft*** Health care fraud costs the United States tens of billions of dollars each year. Some estimates put the figure close to \$100 billion a year.
- There will be 20 billion connected devices by 2020 – all interacting with the cloud
- Virtual sensors resulting from social media sentiment tracking will add exponentially to the multitude of data and complexity
- The global cyber security market will continue to grow and is projected to reach \$202B by 2020



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