Greenlight TECHNOLOGIES

Insider Access Risk – The New Security Perimeter

Greenlight Technologies Overview

- Greenlight provides business stakeholders with visibility into the financial impact of risks to the organization
  - ✓ Detective Control Monitoring
  - ✓ Preventative Policy Enforcement
  - ✓ Quantification of Access & Transaction Risk

- Strategic partnerships

SAP Certified Integration with SAP BusinessObjects

ORACLE Platinum Partner

ca technologies

- SAP Premier Partner : Endorsed Business Solution
- Awarded Best Big Data Solution for SAP HANA
- Highest Possible Rating in Gartner Marketscope Report

Rapidly Expanding Customer Base

ca technologies, MERCK, IBM, Unilever, Newell Rubbermaid, Chevron, BBC, Bridgestone, Pearson, Sharp, Coca-Cola, Shell, Unisys, Amgen, Loblaws, Reliance Capital, smiths medical, Southern California Edison, An Edison International Company, elster, Arkema, Hanes, EDF, Johnson Controls, PG&E, Pacific Gas and Electric Company, TATA, Aflac

Enterprise Business Controls Platform

Policy Enforcement

Real-Time, In-Line Preventative Controls

Access Risk

Exception Based Monitoring,
Insider Risk Management,
Business / IT Orchestration,
and Access Intelligence

Operational Performance

Business Transaction Monitoring,
CFO Key Performance Indicators,
Industry Regulations,
and Audit Automation

Reporting	Modeling	Rules & Analytics	Workflow	Embedded GRC / IDM

Enterprise Access and Security Management

Integration: Discovery, Aggregation & Correlation
Runtime Controls Analysis

ERP

Business Systems

Legacy Applications

Custom Solutions

Cloud & SaaS

IT Systems, Servers & DB

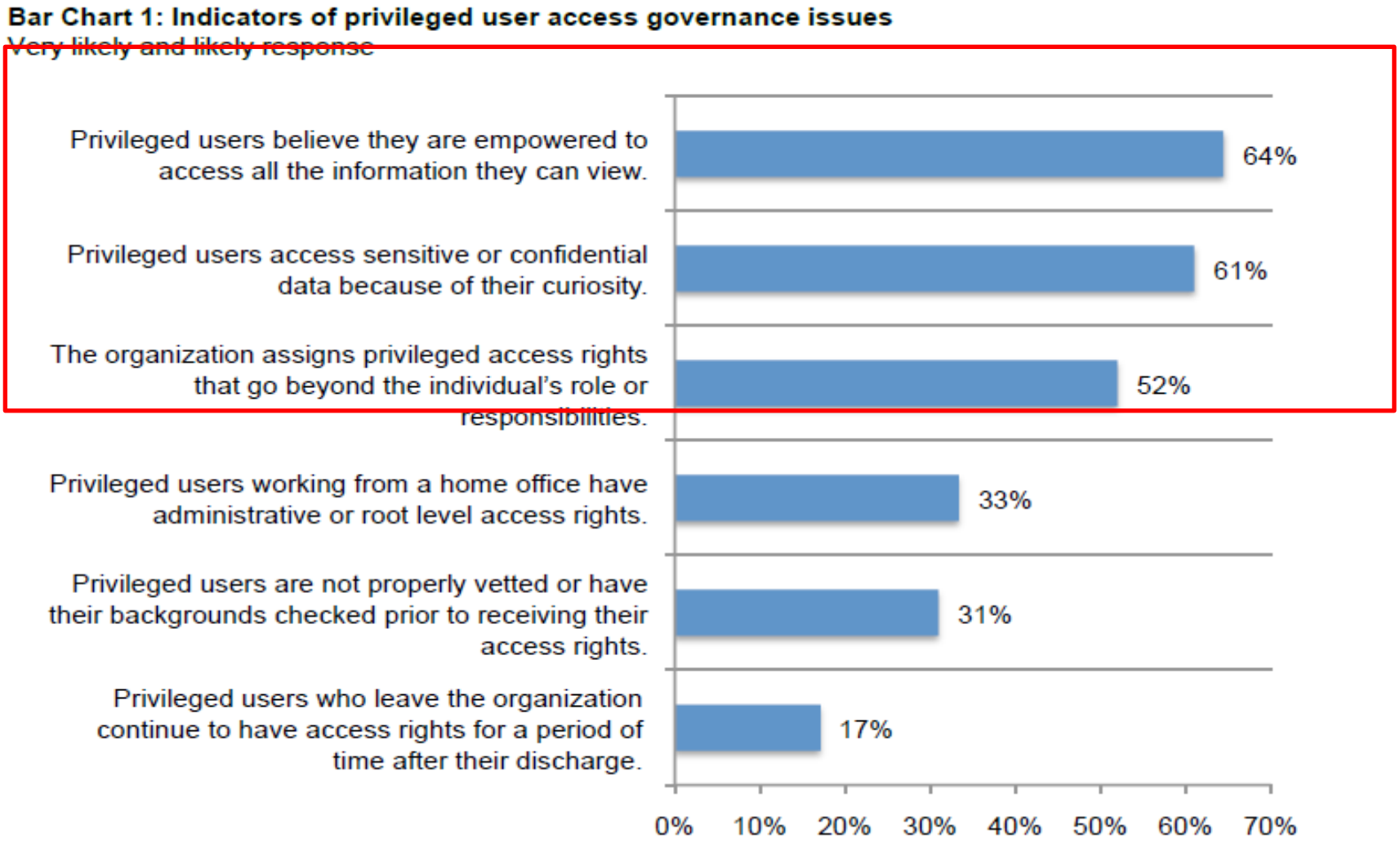
Insider Access Risk – The New Security Perimeter

Attack Of The Super-User!!!!!

- Snowden access was at system administration level
  - Got around normal user access role restrictions
  - Had the ability to move files around at will and could claim he was doing so in order to repair a corrupted drive or conduct some other maintenance operation
- Snowden's administrator account gave him the ability to log into the accounts of other users of the agency's NSAnet computer systems – some of whom had higher security clearance than Snowden
  - Snowden would need to avoid detection by audit log analysis when changes (delete changes after the fact so period based detection wouldn't catch)
- Given the apparent lack of insider threat protection the agency had in place, they may never fully know how he did it

Insider Access Risk – The New Security Perimeter

Insider Risks Are Pervasive & Not Well Managed



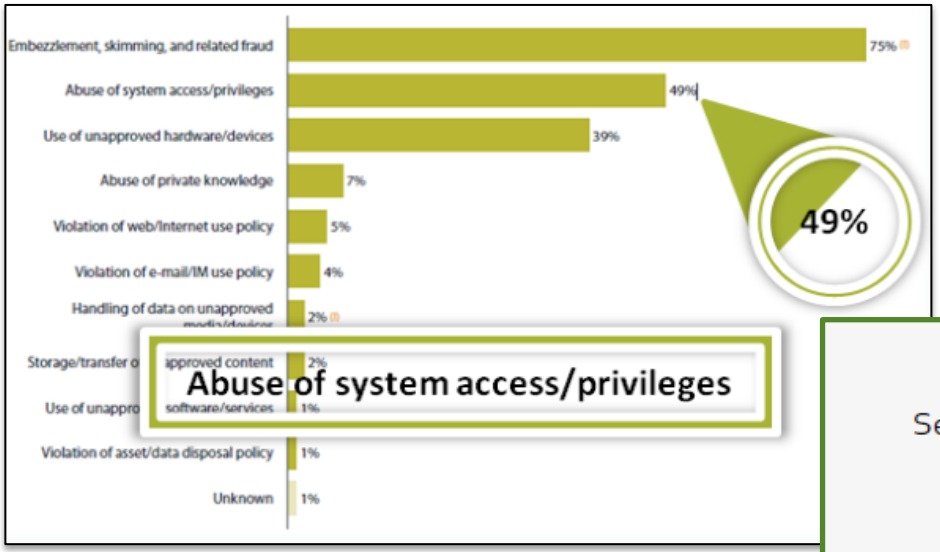
Ponemon Institute – 2013 Cost of a Data Breach Study

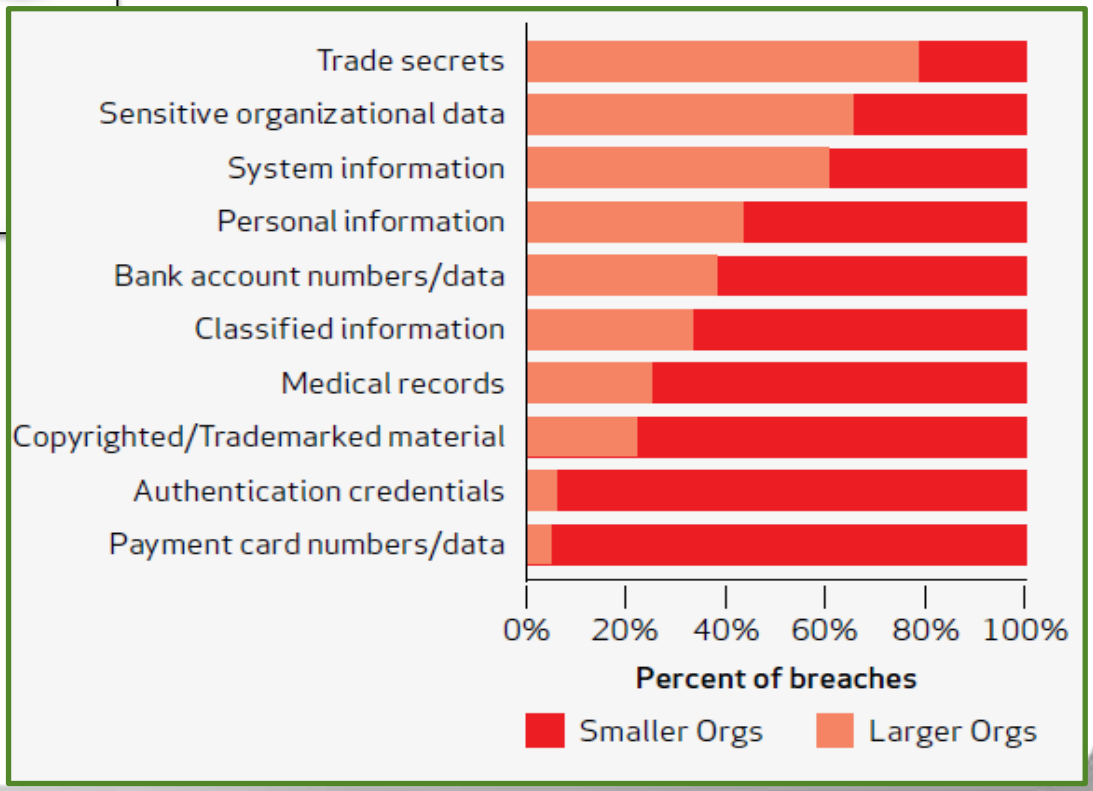
Insider Access Risk – The New Security Perimeter

Deloitte Compliance Trends 2013 Study

Insider Access Risk – The New Security Perimeter

Impact of Misuse of Access – **Fraud, Privacy Breach & IP Loss**

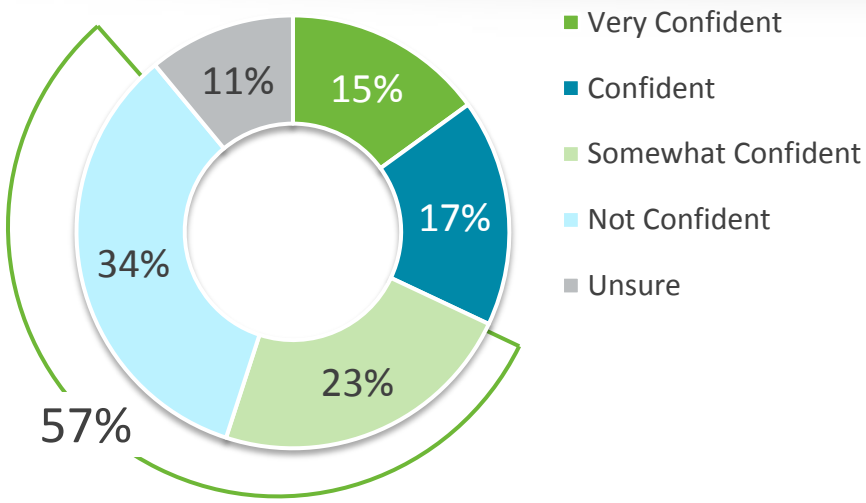




Verizon Data Breach Investigation Report 2011

Can You Answer These Access Risk Questions?

- Do you know who has access to what information resources (applications, systems, data, cloud services) across your enterprise?
- Do you know if the access is needed based on a user's functional role?



How confident are you that your organization has enterprise-wide visibility for user access & can determine if it is compliant with policies?

Source: Ponemon Institute - Access Governance Trends

Can You Answer These Access Risk Questions?

- Do you know if a user's access is compliant or creates some type of risk for the business (analysis)?
- Do you know what a user specifically did with their access at any given time (fine-grained monitoring)?

"A lack of internal controls, such as segregation of duties, was cited as the biggest deficiency"

ACFE - Report to the Nations on Occupational Fraud and Abuse

Assessing The Financial Impact Of Insider Access Risk

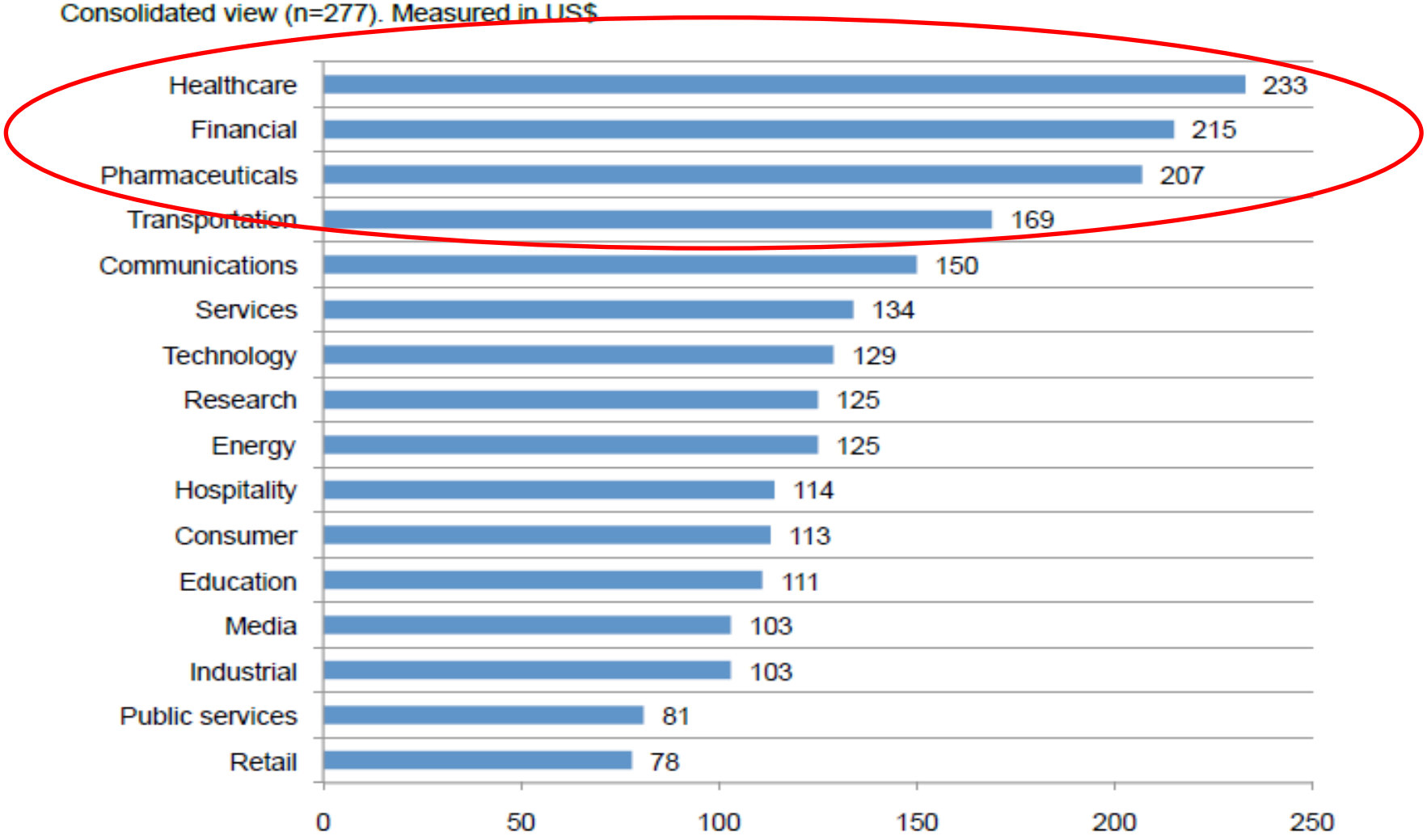
Financial Impact Of Insider Access Risk

- Cost avoidance
  - Detect misuse of access privileges that can result in inappropriate or fraudulent transactions
  - Eliminate loss of sensitive data due to insider risk
    - Average data loss impact of a data breach $3.2M in legal & notification costs as well as $3M in lost customer business

      (Ponemon Institute 2013 research study)
  - Eliminate loss of corporate IP due to insider risk
    - Corporate IP theft is costly to the global economy: U.S. businesses alone lose upwards of $250 billion every year, according to the U.S. Trade Representative
  - Eliminate regulatory fines & penalties due to access control failures

Financial Impact – Data Breach

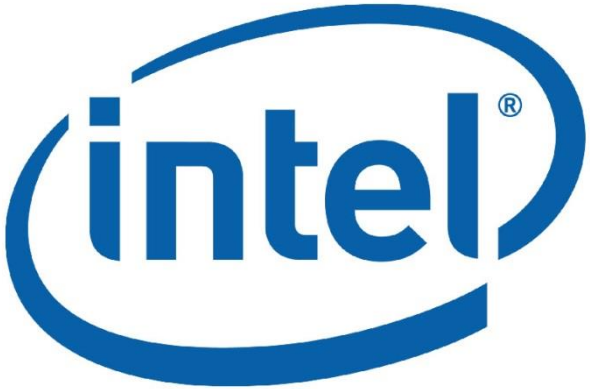
Figure 4. Per capita cost by industry classification
Consolidated view (n=277). Measured in US$



Ponemon Institute – 2013 Cost of a Data Breach Study

Financial Impact - Corporate IP Loss

- Former engineer for both Intel & AMD plead guilty to five counts of fraud for the theft of sensitive Intel documents and intellectual property including information on chip design and manufacturing data
- The value of the information was estimated at $1 billion
  - Non-recurring engineering investment lost
  - Market competitive advantage lost



Financial Impact - Corporate IP Loss

- Former Goldman Sachs programmer, was found guilty on Friday by a federal jury of stealing proprietary source code from the bank's high-frequency trading platform
- He was convicted on two counts — theft of trade secrets and transportation of stolen property
  - Software development investment lost
  - Market competitive advantage lost

Goldman Sachs

Financial Impact - Occupation Fraud Loss

- Sociate Generale was thrown into turmoil in 2008 when a rogue trader with excessive privileges breached five levels of controls to execute a series of fictitious transactions which resulted in $7 billion loss for this French bank

Financial Impact - Occupation Fraud Loss

- Privileged-Users
  - Change to ERP system configurations & master data values a leading indicator in fraudulent transactions
  - Financial impact is $120,000 per incident with more than 1/5th of cases being greater than $1 million in loss according

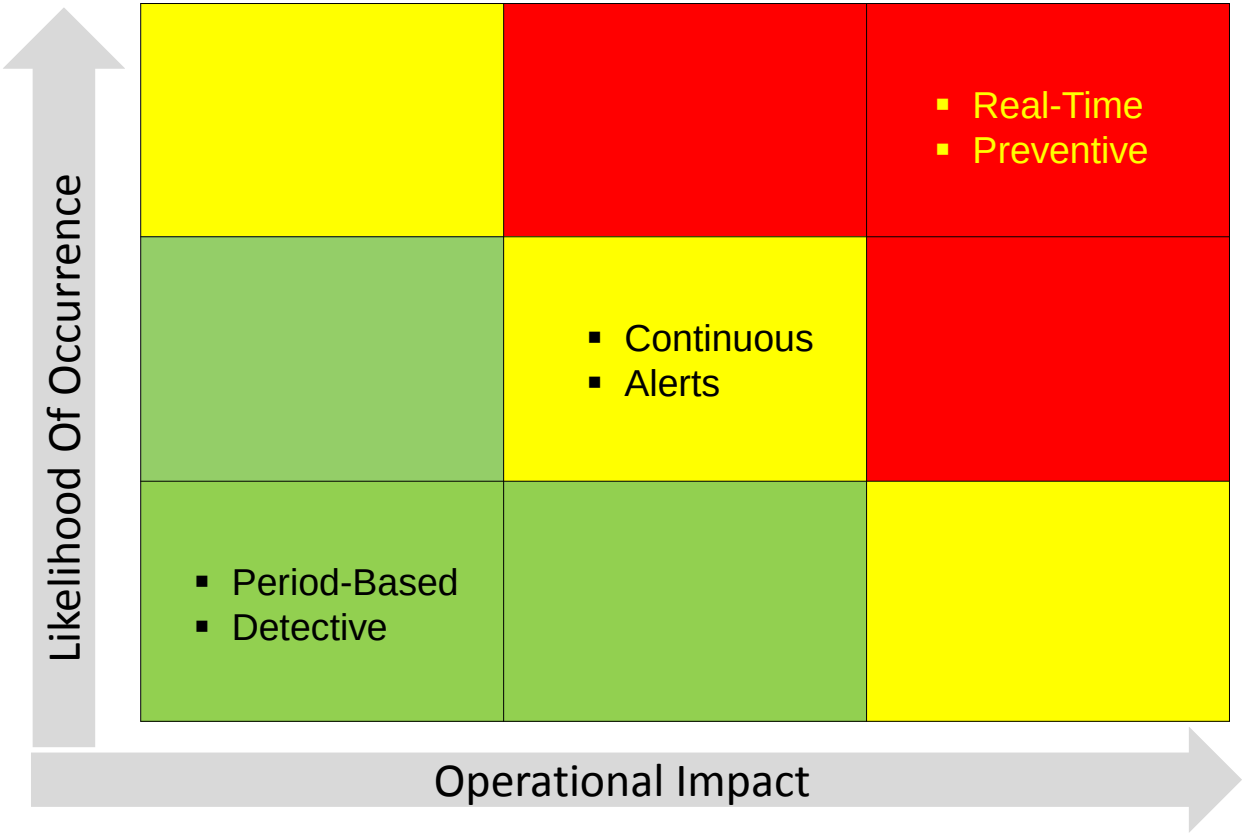
Association of Certified Fraud Examiners 2012 Report To The Nations

Internal Audit Helping The Business Evolve Their Insider Risk Control Monitoring

Enterprise Access Controls Challenges

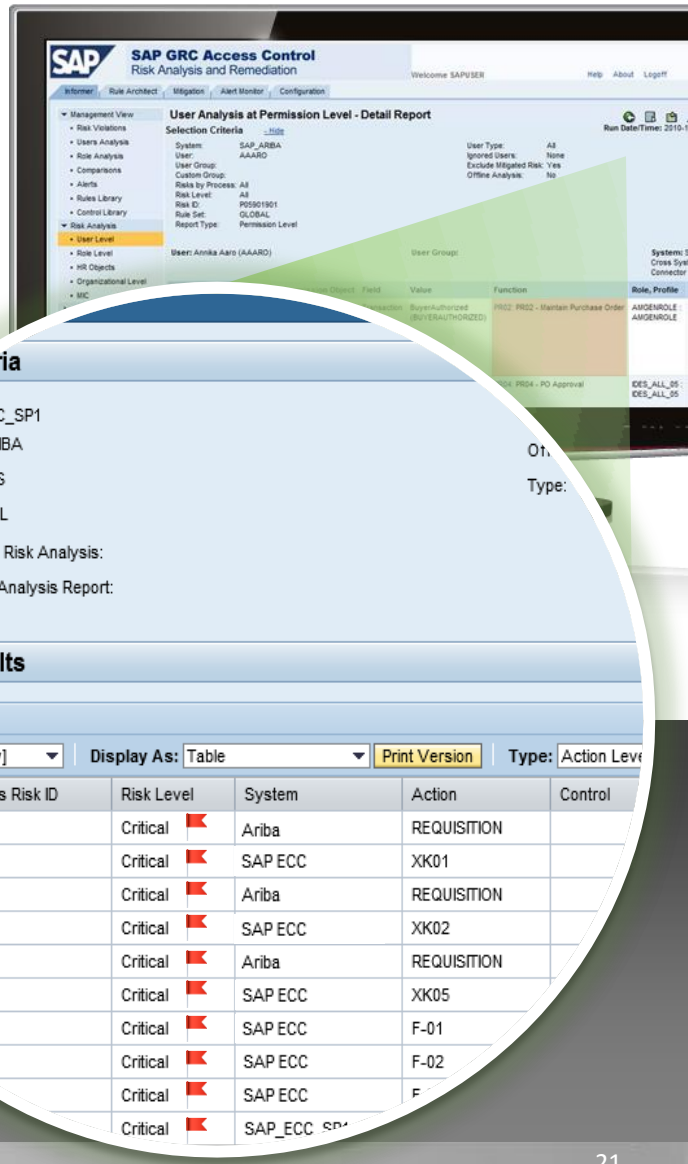
- Application, data & system controls not working
  - Coarse-grained view of access (application & enterprise role level)
  - Controls correlation is a must
    - Correlate across complex transactions/business processes
    - Correlate across multiple applications that support these transactions
    - Correlate across users & their activities
  - Copy assess issues & group inherence issues
  - False-positive risks
  - SIEM & application auditing
- Business overriding controls
  - SOD
  - High-risk & temporary users
- Manual & period-based controls

Implement A Complete Control Spectrum



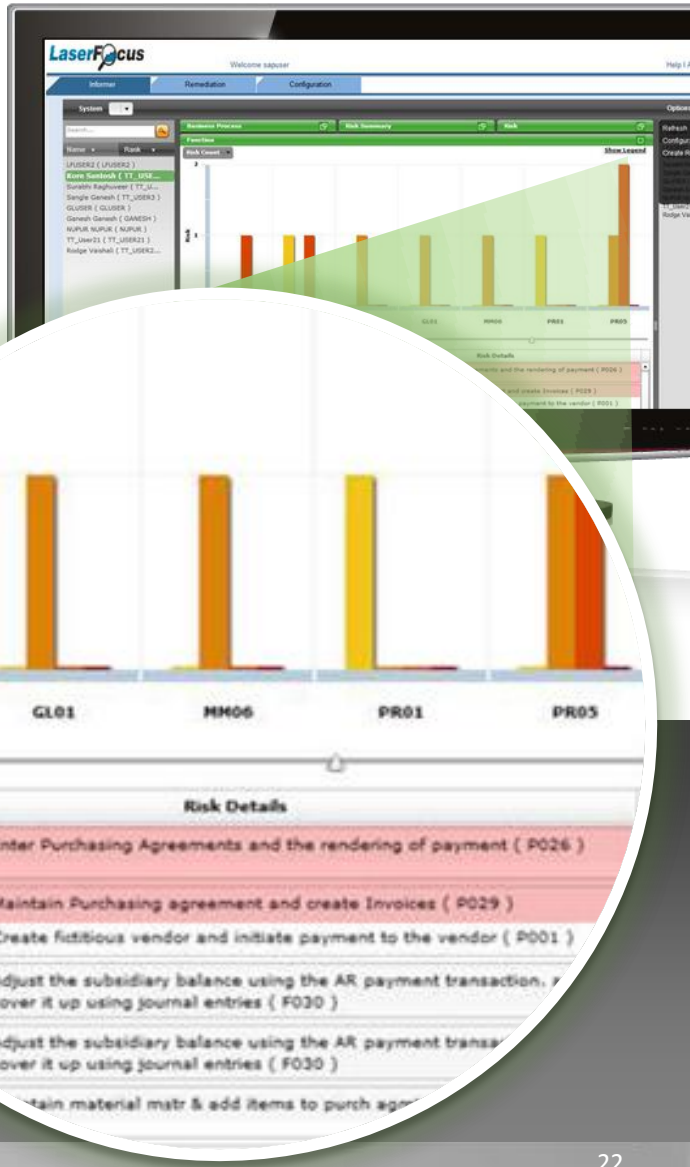
Insider Access Risk Continuous Detection

- ✓ Visibility to user access & risk across all applications (on premise or cloud) & fine-grained compliant user provisioning
- ✓ Continuous control monitoring of actual Segregation of Duties violations
- ✓ Manage & audit process for temporary, privileged-user & sensitive access
- ✓ Closed-loop validation of access change requests (provision & de-provision)
- ✓ Centralized policies (one authoritative rule set)
- ✓ Integrated approach across GRC, eGRC & IDM



Access Risk Analysis & Real-Time Prevention

- ✓ Analysis for the financial impact of access risk
- ✓ Real-time transaction monitoring of business processes for fraud & error
- ✓ In-line preventative policy enforcement across enterprise applications
- ✓ Attribute based monitoring (conditions, variables & events)



Implement An Access Change Control Framework

Joiners – New User On-Boarding

- New user on-boarding triggered through HR event based on job function
- Preventive SoD policy validation against the user's access prior to provisioning
- Automated provisioning of day one birth right access
- Entitlement level provisioning into business applications extends beyond the typical network or platform level username and password available to user's on their first day

Movers – Access Request & Risk Analysis

- Consistent cross system access request capabilities
- Approve new access & access changes to multiple enterprise applications
- Preventive SOD policy validation against the user's access prior to provisioning
- Automated, fine-grained provisioning across all applications

Leavers – Access Termination

- User access termination triggered through HR event
- Satisfy audit requirements to remove user accounts & application roles
- Network and platform level accounts disabled
- Business application and ERP access rights & entitlements revoked
- Manage orphaned accounts & entitlement drag for least privileges

Internal Audit Helping The Business Control Risk

- The business should own this issue but…
- Determine insider access risk monitoring
  - Period-based detection (UAR for 404)
  - Continuous monitoring (policy violations & transactions)
  - Real-time prevention (high risk activities & transactions)
- Don’t get caught in the enterprise or application user role trap
  - Run rules/controls on users to their exact access permissions
- Highly privileged users
  - Eliminate shared passwords for root/system administration level access
  - Require rule monitoring & auditing of all highly privileged user actions