How Identity and Access Management can enable Business Outcomes and Enterprise Security

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Biography

Suresh Chandra Bose, Ganesh Bose is a Manager Consulting at Cognizant Business Consulting practice. Suresh is based out of Austin, Texas and has been in the IT Industry for more than 16 years with vast Consulting experience in various industries and executed Strategic initiatives for various Fortune 100 companies in the areas of PMO, PPM, Process Consulting, Program Management, TMMI assessment/implementation, Organization Strategy, Test Consulting and CIO/Governance Dashboard/Metrics for various clients across the globe.

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In today’s consumer driven enterprises, infrastructures are remote and distributed while business and IT operations are pervasive through mobile and virtual technology.

Customer collaboration and Communication on social platforms and service models such as (Bring Your Own Device) BYOD and Bring Your Own Application (BYOA) have broadened the security perimeter and increased the risk exposure points.

In this scenario, the need for an identity and access management (IAM) solution has become paramount and is a top agenda item for most chief information officers (CIOs). In this session we will discuss key focus areas to establish holistic IAM solutions such as

- effective governance
- automated role management
- authentication
- user profiling
- integration
Some of the key objectives of IAM in today’s environment are:

- **Service delivery** to the business across hosted, remote, physical and virtual infrastructures
- **Secure collaboration** with customers, partners and employees
- Technology provision using access models spanning across web, mobile and application programming interfaces
- Role management through role definitions, user groups, identity verification, and authentication
- Compliance with regulatory requirements through personal data security, enhanced access control and privileges management
- Allow line of businesses (LOBs) to simplify access decisions based on trend analysis and save costs by rationalizing system licenses
Organizations are failing at early breach detection, with more than 92% of breaches undetected by the breached organization. Situation can be improved with better threat intelligence, the addition of behavior profiling and better analytics - Gartner Magic Quadrant for SIEM, 25 June 2014

Vendors that can provide quick integration, a wide array of supported applications, a full spectrum of IAM features, and high availability position themselves to deliver strong service and a lower total cost of ownership - The Forrester Wave(TM): Enterprise Cloud Identity And Access Management, Q3 2012", Forrester Research, Inc.

Strong capabilities for access request management, access analytics, provisioning, access risk management, enhanced data governance, integration with Privilege Management or User Activity Monitoring are integral to Access Governance.

- KuppingerCole Leadership Compass Access Governance
Following are some essentials for a successful implementation of IAM:
Business case for automation of IAM

**Automation Components**

- User entitlements
- User Provisioning
- Self service user management
- Password management
- Access Enablement / Change Management / Re-certification

- User Authentication
- Coarse grained Authorization
- SSO to legacy and web applications
- Auditing and Reporting
- Identity Federation

- Role Mining
- Role Engineering
- Privileges Management
- User profiles
- Access Profile Cloning
- Role Based provisioning
- Role Life Cycle Management

- Identity Data Synchronization
- Integration with HR databases and active directory
- Identity Life cycle management
- Centralized and delegated administration

- User consolidation
- Data Migration
- Data synchronization
- User administration

- Unique approach through a combination of COTS based and custom implementations
- Multi-factor Authentication solutions as a mechanism to prevent frauds (biometrics)
- Detailed Data Profiling (source, storage, access rules and operations)
- Device identification, Geotagging
- Transaction Analysis, Pattern Recognition

**Integrated IAM solution**
Role Policy Management and Provisioning

- Provides real-time enforcement of policy/rule and role based user access to functional and data levels across all applications within an organization
- Provides centralized administration of roles/policies/rules/resources
- Serves as a central repository of role/policies/rule/resources, thus simplifying business intelligence and compliance audit data gathering efforts, and helps to create a more complete view of user access in an organization
- Supports enforcement of Segregation of Duties (SoD) preventing conflict of interest situations
Access Certification and Governance

- Automates discovery, analysis and management of user access rights
- Employs Least Privilege Access Principle (i.e. users are given access to only what is required to perform their job function)
- Facilitates periodic review and re-certification of access by business managers and data owners
- Ensures manual or automated remedial action to rectify access rights exceptions inconsistent with policy or regulatory requirements
- Demonstrates compliance with applicable regulations or business policies
- Enables multi factor authentication such as biometrics for sensitive data or PII (personally identifiable information)

Key considerations for success in IAM - Access Certification and Governance

- Define Certification/ remediation strategy
- Define implementation plan
- Obtain Business sign-off

- Analyze data and identify Business rules
- Collection of access information and HR data
- Work with business owners
- Analyze data from applications and identify Application access information

- Analyze data and identify Business rules
- Business Access Certification
- Privileged Access Certification
- Generic Account Certification
- Administrative Account Certification

- Certification: Sign-on certification and changes
- Remediation: Interface to change systems
- Validation: Follow-up to check that remediation has occurred
- Reporting: Audit, Process Progress, Coverage, Impact, centralized warehouse

- Obtain Business sign-off
Key considerations for success in IAM - Single Sign On (SSO)

- Employs identity federation for securely sharing digital identities with customers, partners and remote users across platforms
- Captures identities and record audit trails for web services transactions
- Externalizes entitlement logic from applications and achieves centralized security avoiding need for building security into individual applications thereby reducing complexity
- Enables secure delivery of service and cost effective online collaboration
## Business & IT benefits

### Business benefits
- Increased business user agility and improved business user productivity
- Improved compliance due to proper and periodic enforcement of controls
- Increased reliability due to predictable lead times and consistent quality
- Improved user experience
- Secure collaboration with customers, partners and employees

### IT benefits
- Reduced labor and overhead costs
- Faster provisioning
- Multi-level Authentication combined with global Password policy models & seamless application integration for authorization
- Improved visibility and control over use of IT
- Enhanced logical access controls
Illustrating and augmenting through measures

While IAM is a complex initiative to identify measures for, analytics and measurements can go a long way in helping the organization achieve their business objectives. Types of metrics that can be measured are:

- Metrics that contribute to achieving customer outcomes and influencing them
- Metrics that impact financial performance and
- Metrics that monitor compliance
- These can be monitored at multiple levels such as strategic, tactical and operational to obtain a top-down 360 degree view
Illustrating and augmenting through measures - Performance Metrics

Metrics Performance Hierarchy
- Compliance
  - No. of exceptions related to legacy users with access to business systems
  - Systems without CI owners
  - No. of accounts non compliant with password policies
- Financial
  - Identify Governance cost per user / per service
  - Cost of Compliance
- Outcome / Customer
  - User satisfaction survey scores
  - No. of unique / privileged accounts per user
  - Vol. of password reset requests per month / per user
- Strategic
  - Avg time for approvals
- Tactical
  - No. of reconciliation exceptions
  - Vol. of account reconciliation exceptions
  - Avg time to provision / de-provision accounts

Metrics Measurement Hierarchy
- Must track
- Should track
- Optional
Illustrating and augmenting through measures - Identity intelligence

Analytic Reports

Identity intelligence should comprise of analytics on identity related status and trends. Some of the reports that could be generated for analysis are:

- Ambiguities in entitlements, user profiles, accounts and roles mapped to licensing
- Privileged user access and zombie accounts (accounts that remain active after user has switched roles or left the organization)
- DLP monitoring logs on sensitive transactions (financial statements, memos) and ambiguities in identities and entitlement level authentication
- Historical access information on transactions / events monitored
- Threats such as DDoS and APT can be monitored and reported upon and analyzed to enhance security capabilities
- Monitoring logs of privileged user accounts, as they would be vital for forensic analysis
- Access attempts from hackactive regions monitored using geotagging
Summary

Through the earlier sections we have established why IAM is no longer a debatable option but a definite need for organizations wanting to
• align themselves better through agile and flexible IT models
• save costs
• improve performance against compliance standards
• secure their information
• stay ahead of competitors

An effective IAM strategy coupled with innovative and best in class technologies with the above mentioned capabilities can be a true enabler of business process innovation and help in recognizing the maximum value of investments.

In a competitive business environment where business services are increasingly being delivered over collaborative and social platforms, IAM can prove to be a key enabler of differentiation in
• enterprise risk management
• compliance initiatives
• customer alignment
• relationship management
• reduced TCO
• increased productivity
• improved security
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Questions?
Appendix
Glossary

BYOD - Bring Your Own Device
BYOA - Bring Your Own Application
IAM - Identity and Access Management
CIO - Chief Information Officer
ROI - Return On Investment
SaaS - Software as a Service
LOB - Line of Businesses
SoD - Segregation of Duties
PII - Personally Identifiable Information
SSO - Single Sign On
DLP - Data Loss Prevention
DDoS - Distributed Denial of Service
APT - Advanced Persistent Threats
TCO - Total cost of ownership
IT – Information Technology
IP - intellectual property
References


