

# TECHNOLOGY MANAGEMENT

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**SHRM** "Big Data"

Three features of big data have changed technology requirements for organizations: volume, velocity, and variety.

Big data can help HR in collecting new data, using existing data more effectively, and performing better strategic analysis.

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**SHRM** Global Data Generated Annually

Global Data Generated Annually  
1,000,000,000,000,000,000

<https://explodingtopics.com/blog/data-generated-per-day>

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**SIRM** Information System Components

Information systems are a way to collect, organize, store, analyze, and share data.

They feature four basic component tiers:

- Presentation
- Logic
- Data
- Communications

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**SIRM** Integration

Enterprise resource planning (ERP) systems

- Designed to allow different parts of an organization to access the same data
- Designed for a generalized user's needs

HR information systems (HRIS)

- Specific technology that supports HR functions
- Component of an ERP system

"Best of breed" systems

- HR technology products designed to serve unique situations or satisfy specific preferences
- May not communicate with an organization's database successfully

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**SIRM** Scalability and the Cloud

Flexibility | Control

Economy | Security

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**SIRM** In the News

**Hertz**  
10/27/2023  
 If You Were Impacted by the Hertz Data Breach, Here's What You Need to Do Now  
27 Nov 2023

**The massive AWS outage that broke half the internet is finally over - here's what happened**  
7 Nov 2023

**3,000 US flights are canceled as a global computer outage wreaks havoc on businesses, 911 systems and government agencies**  
27 Nov 2023

**SS StateScoop**  
**Fulton County, Georgia, refuses to pay ransom, again**  
 For a second time, the ransomware group Lockbit 3.0 gave Fulton County, Georgia, a payment deadline. And, again, the county refused to pay.  
Feb 29, 2024

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**SIRM** Data Centers

|          |   |
|----------|---|
| Tier IV  | 99.995% availability<br>25 minutes downtime |
| Tier III | 99.982% availability<br>1.6 hours downtime  |
| Tier II  | 99.749% availability<br>22.7 hours downtime |
| Tier I   | 99.671% availability<br>28.8 hours downtime |

**NEED!**

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**SIRM** Security

- Ensure confidence in security of purchased systems and software.
- Assign appropriate user security levels.
- Implement governance policies and processes to ensure transparency.

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**SIRM** HR Technology Applications 

HR software products can:

- Automate complex processes.
- Produce data for other applications.
- Support data analysis.
- Support compliance-related activities.

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**SIRM** SaaS and AI 

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|---|---|
| <p><b>Software as a Service (SaaS)</b></p> <ul style="list-style-type: none"><li>Owned, delivered, and managed remotely by one or more providers.</li><li>Delivered over the Internet.</li><li>Customer can add capacity, components, and features.</li></ul> | <p><b>Artificial Intelligence (AI)</b></p> <ul style="list-style-type: none"><li>AI capable of dynamic response</li><li>Interwoven with countless other applications and technologies</li><li>Enhances communication and documentation processes as well.</li></ul> |
|---|---|

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**SIRM** Self-Service Technologies 

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|---|---|
| <p><b>Employee self-service technologies</b></p> <ul style="list-style-type: none"><li>Enable employees to enter and edit their own data.</li></ul> | <p><b>Manager self-service technologies</b></p> <ul style="list-style-type: none"><li>Enable managers to handle HR-related transactions.</li><li>Save time for everyone</li></ul> |
|---|---|

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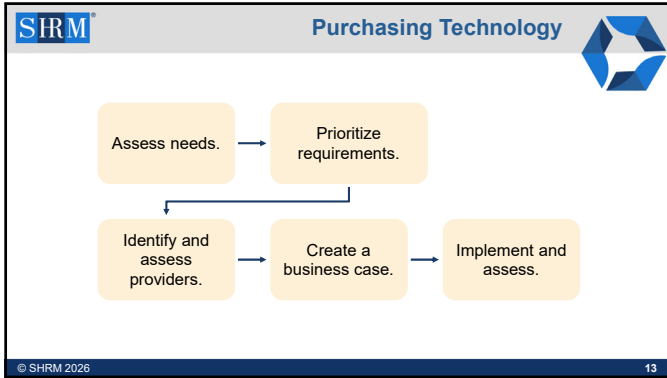
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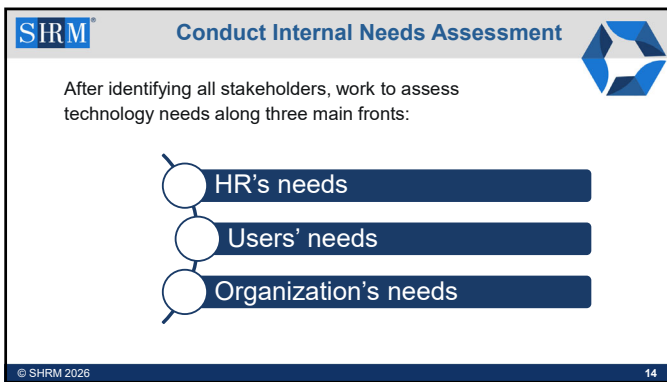
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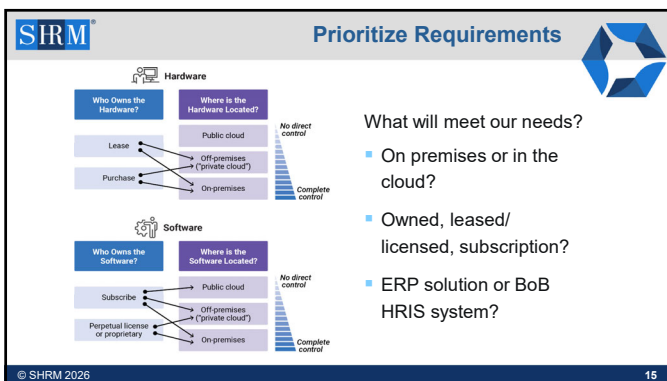
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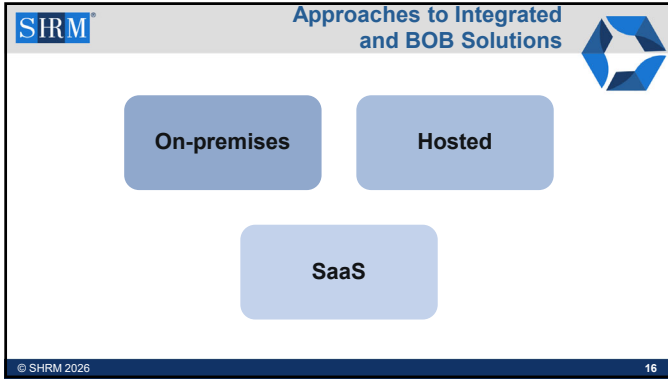
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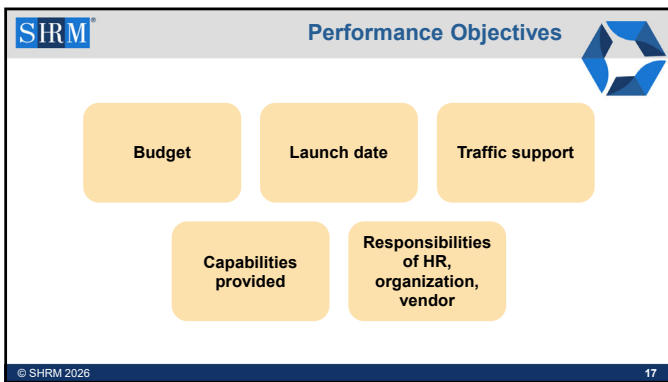
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**SIRM** Create Business Case 

Any major IT purchase will have to:

- Align strategically with organizational and HR objectives.
- Add valuable capabilities.
- Affect organizational risk level in an acceptable manner.
- Provide a reasonable return on investment.

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**SIRM** Implement and Assess 

- May be tested in one part of organization before broad implementation.
- Implementation requires change management skills.
- Project must be assessed against original criteria.
- Assessment should also consider cost of operation and projected life span.

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**SIRM** Technology Risk Categories 

Data and system security      Data privacy

Social and ethical implications

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**SIRM** Data and System Security

Limiting logical and physical access to data/systems

**Data security**

Encrypting data that is transmitted or stored

Defending against hacking and social engineering

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The diagram shows a central box labeled 'Data security' with three lines connecting it to three surrounding boxes: 'Limiting logical and physical access to data/systems' at the top, 'Encrypting data that is transmitted or stored' at the bottom left, and 'Defending against hacking and social engineering' at the bottom right.

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**SIRM** Social Engineering

Train users to:

- Never disclose a password to anyone.
- Not give private information to anyone they do not know.
- Click links only from trusted sources.
- Delete unsolicited e-mails.
- Assess requests and investigate if they are unusual.

Fake job openings

Phony security alerts

Phishing

Common social engineering tactics

"Click this link" scams

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The diagram features a central dark blue circle labeled 'Common social engineering tactics'. Four arrows point towards this central circle from four surrounding light blue boxes: 'Fake job openings' (top), 'Phony security alerts' (right), 'Phishing' (left), and '"Click this link" scams' (bottom).

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**SIRM** GDPR Themes

The EU General Data Protection Regulation (GDPR) is the most important change in data privacy regulation in 20 years - we're here to make sure you're prepared.

Enforcement date: 25 May 2018

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The image shows the European Union flag with a white text box overlaid. The text box contains the text: 'The EU General Data Protection Regulation (GDPR) is the most important change in data privacy regulation in 20 years - we're here to make sure you're prepared.' Below the text box, the text 'Enforcement date: 25 May 2018' is written in a white, curved font.

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**SIRM** GDPR Themes

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**SIRM** Summary of GDPR Provisions

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**SIRM** Top GDPR Fines

- Meta Ireland Ltd. - € 1.2B + €405m + €390 + €265m + €60m + €7m
- Amazon Europe - €746m
- Tik Tok - €324m
- WhatsApp Ireland - €225m
- Google Inc - €90m fine + €60m + €50m
- Criteo - €40m
- **H&M - €35.3m**
- TIM - €27.8m
- British Airways - €22m
- Clearview AI Inc. - €20m
- Marriott International - €20m
- Wind Tre - €16.7m

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**SIRM** H&M


**4. H&M - €35.3m fine (2020)**

GDPR breaches - Articles 5, 6

In 2020, the Data Protection Authority in Hamburg fined H&M €35m for the illegal surveillance of its employees.

After employees took a holiday or sick leave, they had to attend a return-to-work meeting. The company recorded some of these meetings, and the data was accessible to over 50 H&M managers.

This resulted in the company keeping "excessive" records on its workforce's families, religions, and illnesses at its Nuremberg service centre. The company then used the data to help evaluate employees' performance and make decisions about their employment.



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**SIRM** California Consumer Privacy Act

1 Jan 2020

The intentions of the Act are to provide California residents with the right to:

- Know what personal data is being collected about them.
- Know whether their personal data is sold or disclosed and to whom.
- Say no to the sale of personal data.
- Access their personal data.
- Request a business to delete any personal information about a consumer collected from that consumer.
- Not be discriminated against for exercising their privacy rights.
- Companies may face fines of \$2,500 to \$7,500

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**SIRM** Social and Ethical Dimensions

- Considerations include:
  - Disadvantages created by recruiting strategies.
  - Social media providing excessive information for some candidates.
  - Employee records affecting promotional opportunities.
  - AI results related to inaccurate and limited data, intentional bias, and unintentional bias.



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**SIRM** Collaboration Policies and Approaches

Organizations have introduced communication practices designed to maintain structure while, as much as reasonably possible, allowing for natural aspects of human interaction.

*Examples:*

- Meeting times that can accommodate most participants
- Creating agendas with time estimates for each topic
- Providing the meeting host full control over technological tools
- Recording discussions/meetings
- Using passcodes to restrict participation to invitees
- Hierarchies of authority for access to documents
- Legal disclaimers outlining rights/responsibilities
- Balancing security and rights protection with accessibility

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**SIRM** Policies Relating to AI-Use

- Inaccurate AI Responses
- Plagiarism and Intellectual Property Infringement
- Copyrightability and Content Ownership
- Bias
- Privacy and Information Security
- Ethical Use

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**SIRM** "Bring Your Own Device" (BYOD)

Realistic BYOD policies allow employees to use their personal digital devices to access the organization's network but define certain restrictions on their use.

- Restrict the use of personal devices while the employee is working in the workplace.
- State which devices will be supported by IT and the requirements for using the device.
- Clarify financial arrangements and legal rights.
- Define security measures.

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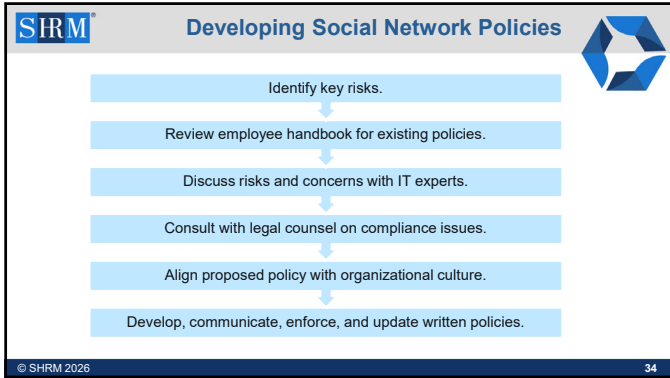
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