# Cyber Security in Today's World

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November 2020



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**20,500**
talents

11,200
in Europe

4,075
in North America

4,320
in Asia

905
in rest of the world

Over
**10,000**
customers

Collaborations with the leading global brands

# WOMEN AND MEN AT THE HEART OF OUR DEVELOPMENT

**~2,000**
new hires
every year

Presence in
**55** countries
**144** plants
**15** R&D centers

# INNOVATION DRIVEN

## WE ARE INNOVATION DRIVEN

TOP 100 GLOBAL INNOVATORS Clarivate Analytics

**IN THE TOP 100 GLOBAL INNOVATORS, FROM 2012 TO 2018**

- **1,600** researchers, **60** R&D partnerships
- **15** R&D centers on 3 continents *(Europe, Americas et Asia)*
- **222** patents filed in 2019, 67% relating to sustainable development issues
- **2.8%** of Group sales allocated to R&D
- **~15%** of sales consist of products marked for less than 5 years
- **1** incubator dedicated to breakthrough innovations

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# OUR WORLD IS CHANGING FAST, ACCELERATING DEMAND FOR NEW MATERIALS

| Future of mobility | Urbanization | Environment | Industry 4.0 | Consumer demand |
|---|---|---|---|---|
| Lightweighting | Insulation | Wind, solar, hydrogen | 3D printing | Personalized designs |
| Durability | Energy efficiency | Water treatment | Miniaturization | Performance |
| Batteries (energy storage) | Modular construction | Renewable resources | Smart devices | Sustainability |

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# DIVERSIFIED GROWTH MARKETS

# AGENDA

1 Arkema vision about Cyber Security in Today's World

2 Cyber Security Effort at Group Level

3 Cyber Security Project in China

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# AGENDA

1 **Arkema vision about Cyber Security in Today's World**

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# THE GENERAL CONTEXT OF THE CYBER THREATS IS GROWING ….

## Cyber Geopolitical

## Cyber Criminality

## Cyber Hacktivism

>>>>>>>>>>>> It just happened since this summertime <<<<<<<<<<<<

- Japan's Defense Ministry announced it was investigating a large-scale cyber attack against Mitsubishi Electric that could have compromised details of new state-of-the-art missile designs.
- Huawei accused the U.S. government of hacking into its intranet and internal information systems to disrupt its business operations.
- Tik-Tok banned form US ?

**All countries are preparing for cyber conflicts and not just to defend themselves**

- New Zealand's stock exchange faced several days of disruptions after a severe distributed denial of service
- 235 Million Instagram, TikTok And YouTube User Profiles Exposed In Massive Data Leak
- Garmin, Canon, …& Jack's Daniel: hit by ransomwares with huge impact on business day-to-day activity

**Most of the national Cyber Security agencies have issued an alert bulletin on the high intensity of Cyber attacks**

- Twitter banned the account of the Distributed Denial of Secrets (DDoSecrets), a group that leaks documents online, and blocked links to "BlueLeaks,"
- The hacktivist collective Anonymous took actions to support Black Lives Matter protesters

**All major political and societal events lead to hacktivism actions**

# … AND OUR EXPOSURE TOO

## The adherence of the business to IT and Digital and increasingly important

Cloud Journey

Data Driven Strategy

Application Interconnection

IoT

IA

## Still on premise infrastructures with challenges to address

Hybrid Architecture

Network Segmentation

Vulnerability Management

Data Protection

Obsolescence Debt

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# MOVE OVER THE FORTRESS APPROACH, TIME FOR THE AIRPORT!

**IT Security model = Fortress model**

- Peripheral security (firewall, DMZ …)
- Infrastructure oriented
- Trust inside the Fortress : One trust zone
- The security is the responsibility of a dedicated team

**Cyber Security model = airport model**

- Integrity check (IDS/IPS, DLP…)
- Tower control : Detect & Response
- Zero Trust model : Multizone trust
- The security team “infuses” the principles of Cyber Security Shared responsibility

**→ The airport model is a game changer:**
**We are all an actor of our common Security posture**

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# ARKEMA CYBER SECURITY MISSIONS

## The 5 missions of Arkema's Group Cyber Security Team following the NIST** international standard

### Identify

- Asset Management
- Business environment
- Governance
- Risk Assessment
- Risk Management Strategy

Legal

### Protect

- Awareness Control
- Awareness & Training
- Data Security
- Info protection & procedure
- Maintenance
- Protective technology

### Detect

- Anomalies & events
- Security continuous monitoring
- Detection process

SOC

### Respond

- Response planning
- Communications
- Analysis
- Mitigation
- Improvements

SOC

BCP

### Recover

- Recover Planning
- Improvements
- Communication

SOC

NIST: National Institute of Standards Technology. US Department of Commerce

# ARKEMA CYBER SECURITY CHALLENGES WITHIN COVID-19 CONTEXT

## Focus on operations and threats monitoring with a daily meeting to assess the situation

- **Communicate to the users the good behaviors for Cyber in work from home configuration**
  - Regular communication through Mail, Yammer, Intranet and Teams (Cyber Live Event…)
- **Reduce as much as possible the backlog to ensure the highest reactivity**
  - "Stock & Flow" under control.
- **Cyber exemption to support the new context of IT usage (massive work from home, remote access…)**
- **Set-up urgent remote access capabilities for industrial sites**
  - 10 new remote accesses were granted
- **Accelerate the deployment of Citadel for secure communication**
  - > **500 +** users deployed the first week of the lockdown

**Arkema did not face any critical or major Cyber event during the Covid period, but we experienced**

- **An increase in the number of phishing attempts**
  - Numerous email and Internet addresses blocked by the SOC (+50%)
- **An increase of request coming from French security agency to search suspicious Indicator of compromise (IOC) within our system:**
  - +10 researches done and analyzed with no cyber incident detected

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# PROJECT TEAM ON CHINA CYBER SECURITY LAW

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# WORKING AREA ON CSL:

## Organization

- Set up project team with all relevant departments.
- Name dedicated Company Cyber Responsible.
- Promote CSL concept

## Network Operation Security

- Combine CSL requirements with group Cyber security initiatives.
- Prepare and carry out grading

## Network Information Security

- Implement personal data protection rules, procedures.
- Optimize internal data compliance regime based on CSL requirements.
- Conduct security assessment of cross border data transfer

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# ASSESSMENT FRAMEWORK

## Cyber Security Compliance Pre-assessment Framework

### Network Operation Security

- 1 Classified Protection
- 1 Policy & Process
- 1 Org & People

**Security Operation**

- 1 Security Monitoring
- 1 Log & Record
- 1 Virus & Network Vulnerabilities Mngt.

**Data Security**

- 1 Data Classification
- 1 Data Backup
- 1 Data Encryption
- 6 Data Encryption

- 1 Incidents Mngt. & Contingency Plans

### Network Information Security

- 1 Personal Information Protection
- 4 Internet Content Management
- 5 Internet Content Management
- 1 Real-name Registration Management
- 1 Transmitting Personal Information and
- 2 Important Data Overseas

### Monitoring, Early-warning and Emergency Response

- 1 Security Incidents Monitoring & Response
- 1 Early-warning & Information Reporting
- 1 Contingency Plans & Drillings

### Interaction with Authorities

- 1 Provide technical support and assistance to investigate crimes
- 1 Cooperate with the supervision and detection implemented by authorities
- 1 Cooperate with the emergency drills conducted by authorities
- 1 Report security incidents to authorities

### Critical Information Infrastructure Security

- 1 Independent Org & People
- 1 Security Education & Skill Assessment
- 1 Security Background Check
- 1 Disaster Recovery Backups
- 1 Contingency Plan Drilling Periodically
- 1 Security Plans, Design, Implementation & Monitoring
- 1 Confidentiality Agreements with the Providers
- 1 Network Products and
- 3 Services Purchasing
- 1 Annually Cyber security Risk Assessment
- 1 Evaluation of Transmitting Personal Information and
- 2 Important Data Overseas
- 1 Annually report the assessment Results

### Legend

1. Cyber Security Law
2. Measures for Evaluating the Security of Transmitting Personal Information and Important Data Overseas
3. Measures for Examining the Security of Network Products and Services
4. Regulations on Procedures for Administrative Enforcement of Internet Information Content Management
5. Administrative Provisions for Internet News Information Services
6. Cryptography Law of the PRC

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# THANK YOU - MERCI - 谢谢 !!

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