

A Culture of Content Protection A Century of Compliance and Conformance

Balancing Content Security with Global Distribution Opportunities

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Deluxe Entertainment Services Group*

The World's Leading Brands Trust Deluxe With Their Content

100 Years of Innovation & Services Delivery



Deluxe: From Lens to Multiscreen

Purpose-Built Security Policies Designed for Global Video Distribution

75 worldwide locations 7000 employees	8 Best Picture Academy Award nominees 2016 17 Top Emmy nominated TV shows 2016	1000+ delivery end points monthly digital deliveries 60,000+
minutes processed/week multiscreen-ready variants 7 Million +300	Content localized per month 1.1M+ min	Petabytes 100+ stored 100+ streamed 1.4 transferred/month



In the Digital Age, Piracy Has Taken On New Forms

Then

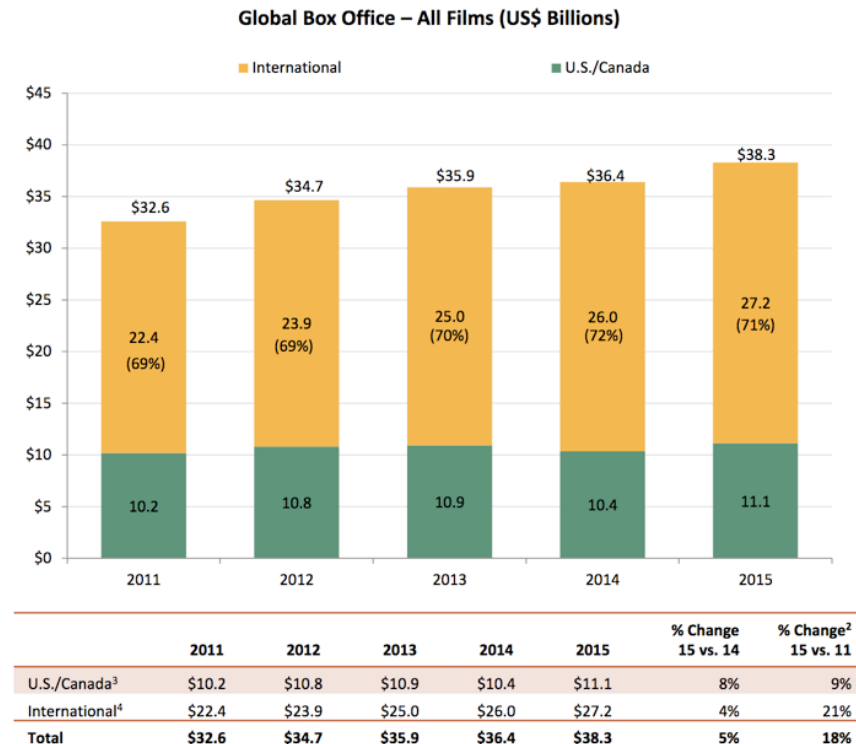


Now



Digital Distribution Extends the Potential Impact

By some estimates, approximately 40% of box office revenue of a typical film is being lost to piracy



Global IP Video Traffic Growth IP Video Will Account for 80% of Global IP Traffic by 2019

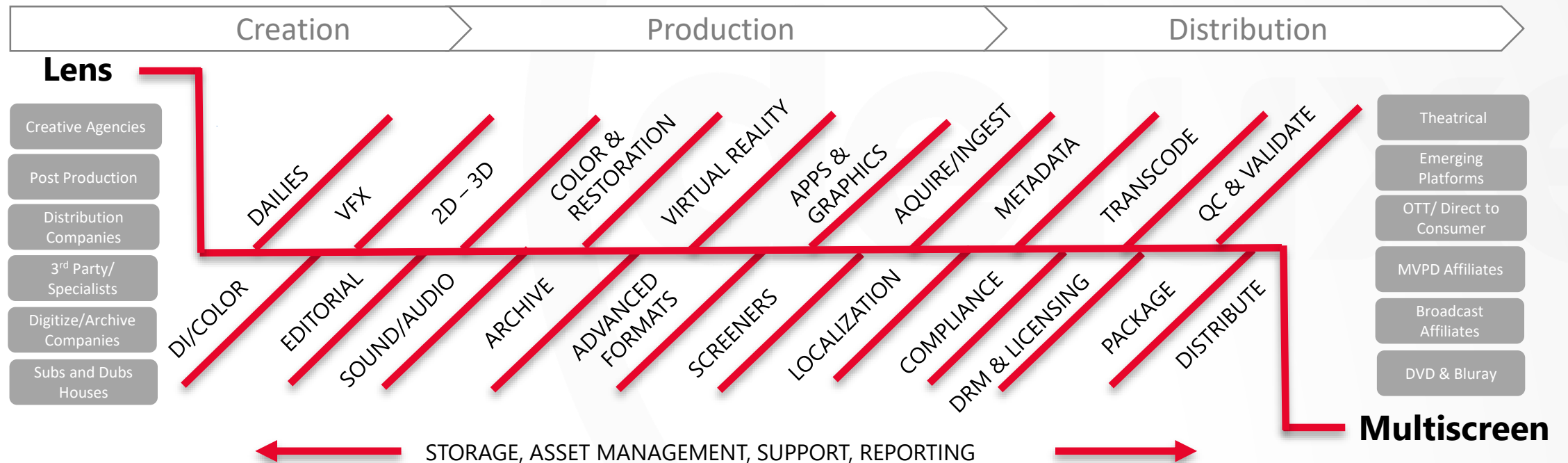


* Figures (n) refer to 2014, 2019 traffic shares
Source: Cisco VNI Global IP Traffic Forecast, 2014–2019
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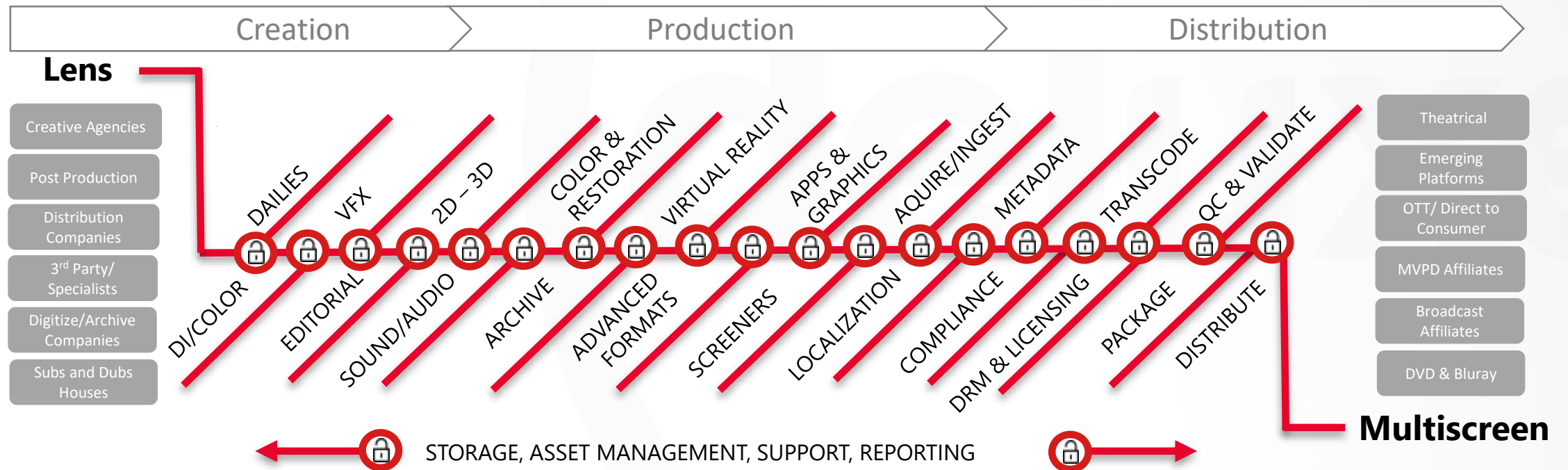
Source: MPA 2016 & Compiled options and statistics from Quora searches

Security Policies for Multi-Channel Digital Content Distribution Must Address the Entire Supply Chain



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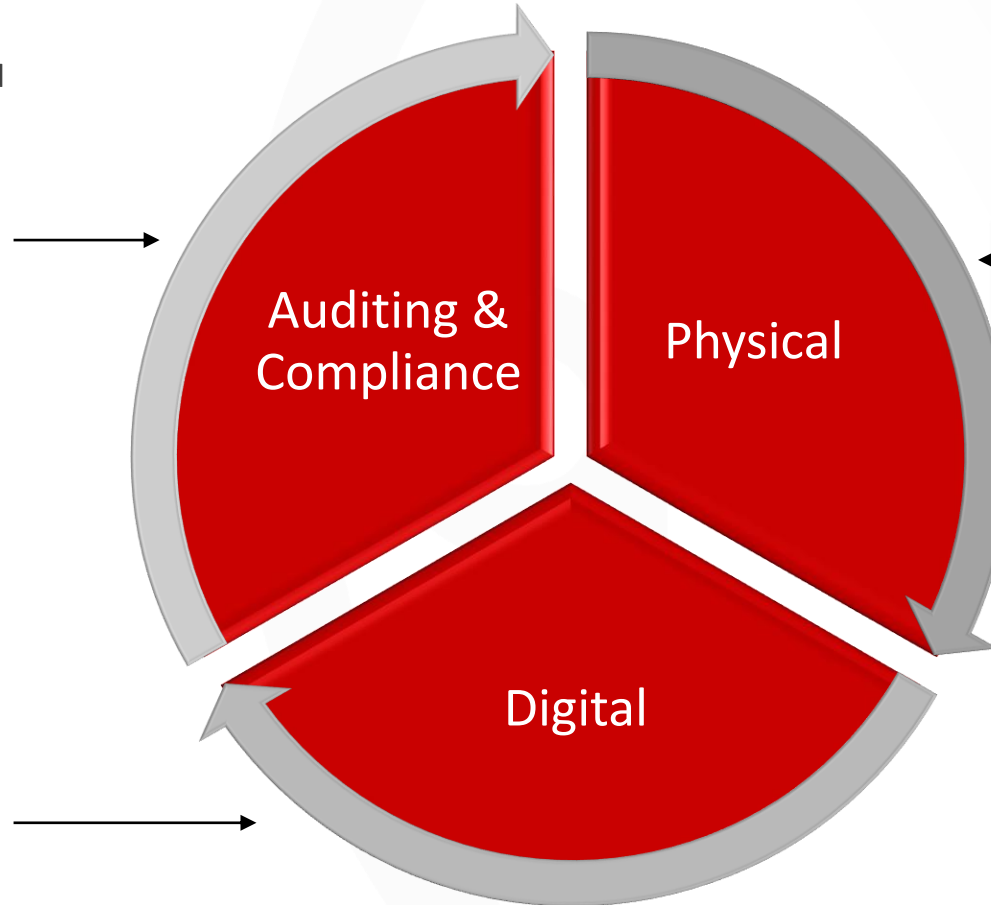
The most vulnerable point in the supply chain is the transfer of the asset



Transfer Risk & Exposure Demands a Solid Security Program that Combines People, Technology, and Processes

- MPA, MPAA, and Content Delivery and Storage Association (CDSA) audited facilities.
- Studio and internal audits
- Penetration testing
- Company-wide standards and update procedures
- Training and awareness

- Encryption and support for major DRMs
- License window delete policies
- Unencrypted file policies
- Networking & delivery by secure connections
- Software and infrastructure monitoring and alarming
- N+1 system redundancy
- Enforced access control lists for 3rd parties
- Layered security of IPS
- Watermarking
- Web monitoring



- Facilities entries and exits, vaults, data engineering, machine rooms and server rooms monitored and secured.
- Isolated production networks
- Dedicated Data I/O departments
- DVD drives and access ports restricted and locked on production systems
- Barcoding and tracking
- Locked shred boxes
- No photography' policy
- Active monitoring of automated and manual IT functions and infrastructure
- Stringent access policies, restricted areas, and NDAs

Security is More than Just “Best Practices”

The human firewall, is the most vulnerable

It only takes ONE employee to compromise security.

A security conscious culture works to establish a well-informed global force to ensure security compliances.

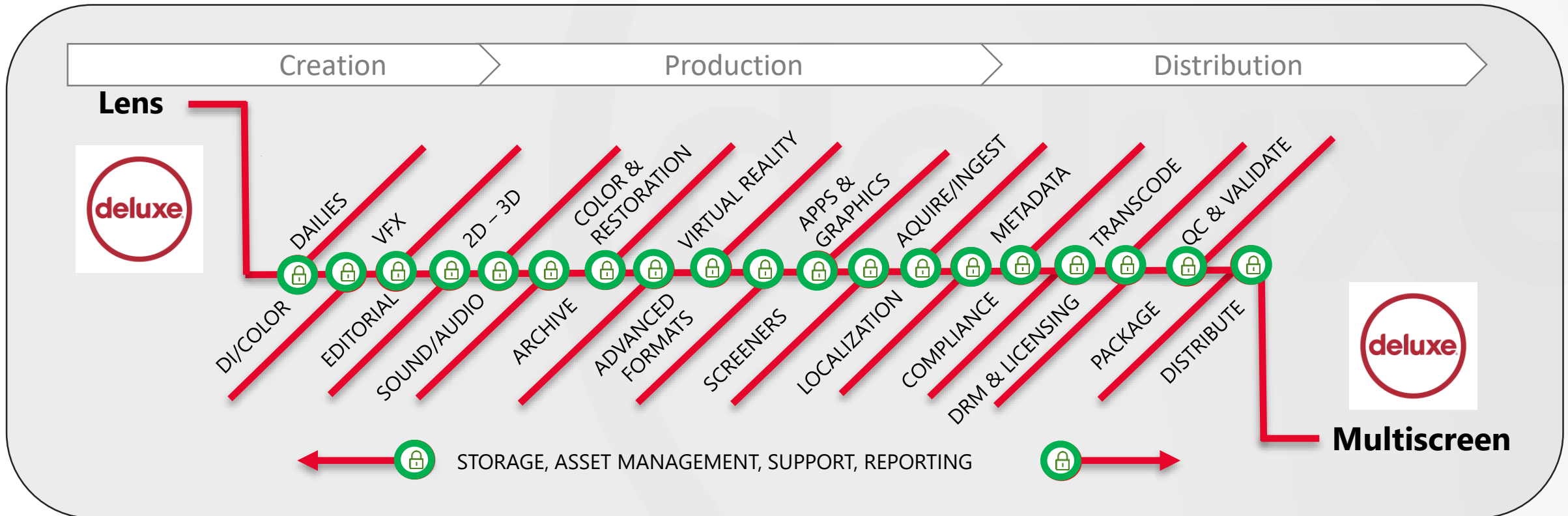
- Security **town hall** meetings
- Tailored annual global security **awareness training**
- **Fresh and current information:** Posters, newsletters, webpage, events, brochures.
- **Lunch and learn** presentations.
- **“Phishie” button:** innovative in-house technology, providing a safe and easy reporting mechanism to deal with suspicious email (and adopted by many industry partners as a best practice).
- **Executive Management support** and engagement

The collage displays various security awareness materials from Deluxe:

- Welcome! Poster:** Features the Deluxe logo and a photo of a smiling woman. Text: "All employees are given direct access to Deluxe facilities and systems. We are counting on each employee to make security-minded decisions everyday to help keep Deluxe secure and prevent security incidents."
- SECURITY GUIDELINES Poster:** Lists key security rules: Don't Download Unauthorized Software, Never Use Simple Passwords or Share Passwords, Social Media Concerns, Clear Your Desk, Email, and Be Aware and Alert. It also includes a "CONTACT US" section with the email security@bydeluxe.com.
- SECURITY AWARENESS: POSTER:** Focuses on "DON'T DOWNLOAD UNAUTHORIZED SOFTWARE" and "NEVER USE SIMPLE PASSWORDS OR SHARE PASSWORDS". It includes a "CONTACT US" section with the email security@bydeluxe.com.
- SECURITY AWARENESS: POSTER:** Focuses on "CLEAR YOUR DESK", "EMAIL", "NDA", and "BE AWARE AND ALERT". It includes a "CONTACT US" section with the email security@bydeluxe.com.
- Deluxe Global Security Brochure:** Features the Deluxe logo and the tagline "Enabling our business. Securing our future." It includes the website security.bydeluxe.com.

Deluxe “Culture of Security” and Global Services Address the Entire Supply Chain

Fewer Vendors = Fewer Transfer Points = Reduced Risk



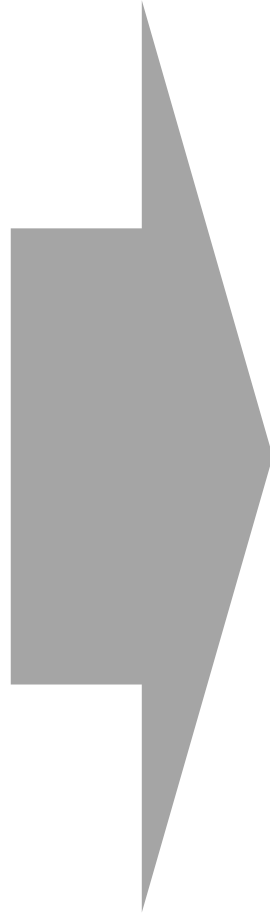
What's Next?

Continuous Investment in the Future

- Deluxe Web Watch™ - watermark and monitoring for secure distribution of screeners
- Forensic watermark technology to protect higher quality 4K and HDR content.
 - 4K and HDR opens door for pirated content in all media types (physical, digital, streamed, download) to be rendered at much higher quality
- Improvements in processing and workflow automation:
 - Offset the need for distributors (i.e. MVPDs) to abstract and manipulate data downstream.
 - Greater auditing and tracking throughout the workflow; providing transparency at every point in the supply chain.
- Expanded use of Virtual Desktops (VDI) to abstract the users from the data.
- Centralized ingest and asset tracking architecture from start through the Deluxe process.
 - Ingest once, prepare and distribute content globally in any format, for any release window and to any device and destination.

A Security Governance Model that Focuses on “Everything”

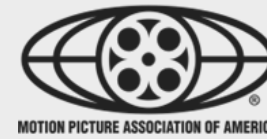
- ✓ People
- ✓ Culture
- ✓ Compliance
- ✓ Physical
- ✓ Digital



Content is **vital** and **valuable**...making it **vulnerable**.

Our clients entrust their **content** into our **care**.

Security is in the **fabric** of our business.





It's Simple:
**We're Revolutionizing
Delivery Security**

Thank You