



W3C PUBLISHING SUMMIT

NOV 9, 2017



# Web Standards and the Path to Frictionless Publishing

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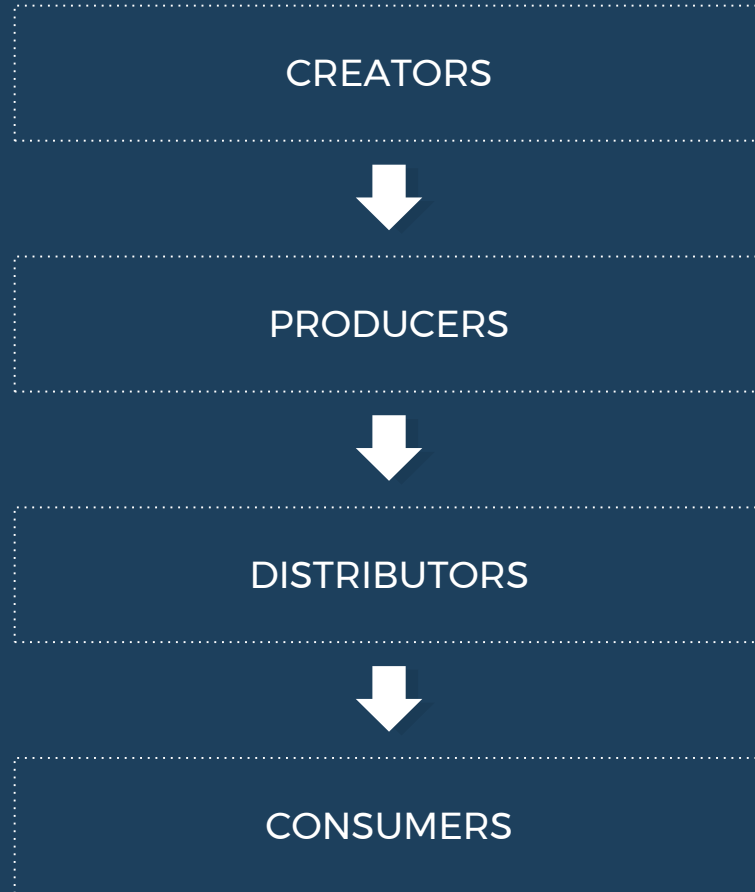
# TOWARDS FRICTIONLESS PUBLISHING

- ▶ Digital transformation of the publishing process has significantly reduced friction in the ecosystem
  - ▶ Lower costs
  - ▶ Faster cycle times
  - ▶ Improved product
- ▶ Yet frictions are still impeding business growth
- ▶ A converged interoperable solution based on web standards can help remove frictions across the publishing lifecycle





# PUBLISHING LIFECYCLE AND ECOSYSTEM [1]



CREATORS

Typewriters Film Paper

PRODUCERS

Manual Typesetting Paste-up  
Photo-typesetters Specialized Equipment

DISTRIBUTORS

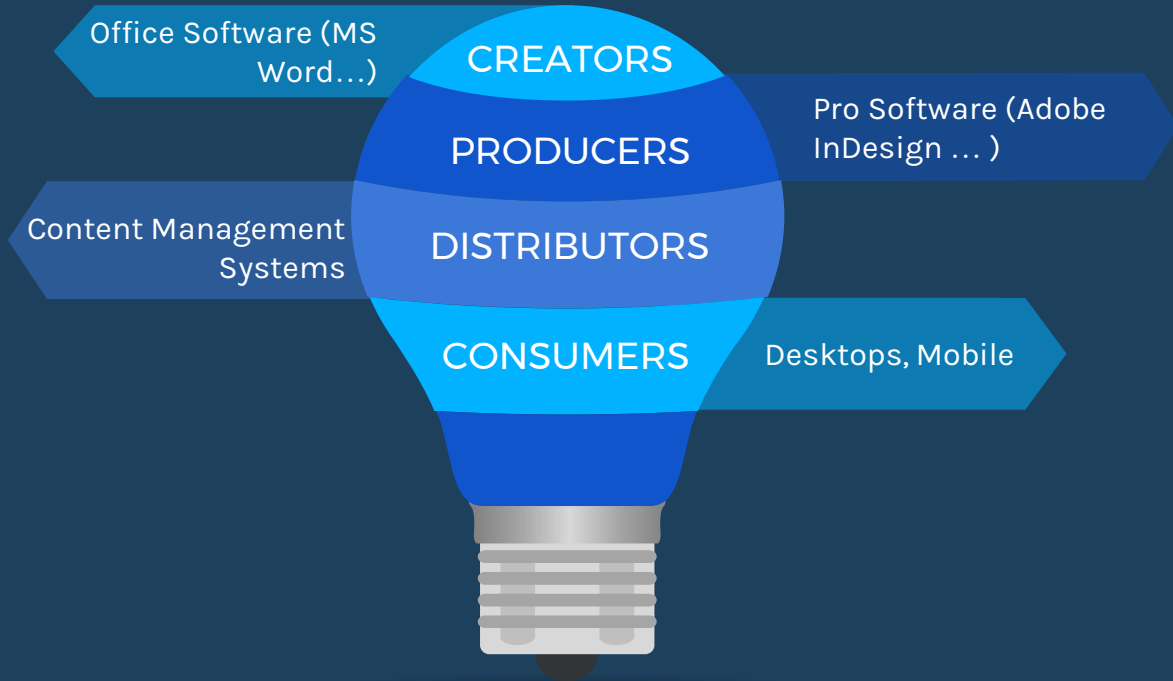
Distribution Manual Supply Chains

CONSUMERS

Paper



**PUBLISHING  
LIFECYCLE  
CIRCA 1960**



- PDF
- XML
- EPUB
- WEB PAGES

# FRICITION

- ▶ Initial phases of digital transformation (desktop publishing era, ebooks era) have substantially removed friction by adopting a set of common technologies
- ▶ But we are not done
  - ▶ Persistent friction in the publishing workflow
  - ▶ New business and user requirements are increasing friction
  - ▶ Diversity of content is increasing friction





# PUBLISHING LIFECYCLE AND ECOSYSTEM [ 2 ]

## CREATORS

Authors Artists Collaborators  
SW Developers Teachers Photographers

Agents

## PRODUCERS

Editors Printers  
Production Typesetters

Reviewers

## DISTRIBUTORS

Retailers Curators Librarians  
Educational Institutions Archivists

Recommenders

## CONSUMERS

Shoppers Readers  
Students Annotators

Advertisers

## CREATORS

Office Software (MS Word...)  
Tablets

Pen, Paper & Ink Comics

Digital Cameras  
Smartphones

## PRODUCERS

Web-based Authoring  
Custom Systems

Pro Software  
(Adobe InDesign, etc)

Prepress Software  
Paper

## DISTRIBUTORS

Print vs. Online PDFs  
Excel

Content Management  
Systems

Paper  
EPUB with or without DRM

## CONSUMERS

Accessibility Systems  
Desktops

Mobile  
Tablets

Apps  
Ereaders

Paper  
Browsers

MS WORD  
CONTRACTS  
EMAIL

XML  
EXCEL  
EMAIL

WEB  
PAGES  
+  
EPUB

P  
D  
F



# PERSISTENT FRICTION IN EXISTING PUBLISHING WORKFLOWS

- ▶ Each technology is only applicable to a portion of the overall workflow
- ▶ Different apps and devices are used to author and assemble content
- ▶ Platform/version limitations and differences
- ▶ Hard to regularize styling and other norms across multiple authors and collaborators
- ▶ Metadata may be absent or erroneous, limiting discovery and reach
- ▶ Paper still the canonical result
  - ▶ Adds cost to distribution and storage
  - ▶ Remixing and content reuse is complex
  - ▶ Result: eBooks converted from print PDFs or digitized from paper





# NEW FRICTION FROM EMERGING BUSINESSES AND USER REQUIREMENTS

- ▶ Fragmentation of device types and platforms
  - ▶ Desktop, tablets, mobile, specialized devices, automotive displays, ...
- ▶ Lock-in to proprietary vendor silos that control and constrain content format, payment means, analytics, consumer communications, etc.
- ▶ Increased importance of accessibility
- ▶ Increased relevance of internationalization and translation
  - ▶ Global markets – internationalization built-in





# NEW FRICTION FROM DIVERSITY OF CONTENT TYPES

- ▶ Integration of audio/video and interactivity into text-based publications
- ▶ New media types (e.g. VR) not standardized or interoperable across tools
- ▶ Apps as a new way to publish and distribute content
- ▶ Web pages as canonical publications
- ▶ Massively linked content: curated books with deep links into the web, or web pages that get curated and published as books
- ▶ New delivery and business models for content monetization (e.g. chunks not whole books)





# HOW TO ADDRESS FRICTION

- ▶ Remove “existing friction” with a full end-to-end standard solution for publishing lifecycle
- ▶ Address new requirements (e.g. multiple devices, accessibility, internationalization) by riding a platform that is already addressing these
- ▶ Address new sources/forms of content (video, VR, books with links) by riding a platform that is already addressing these



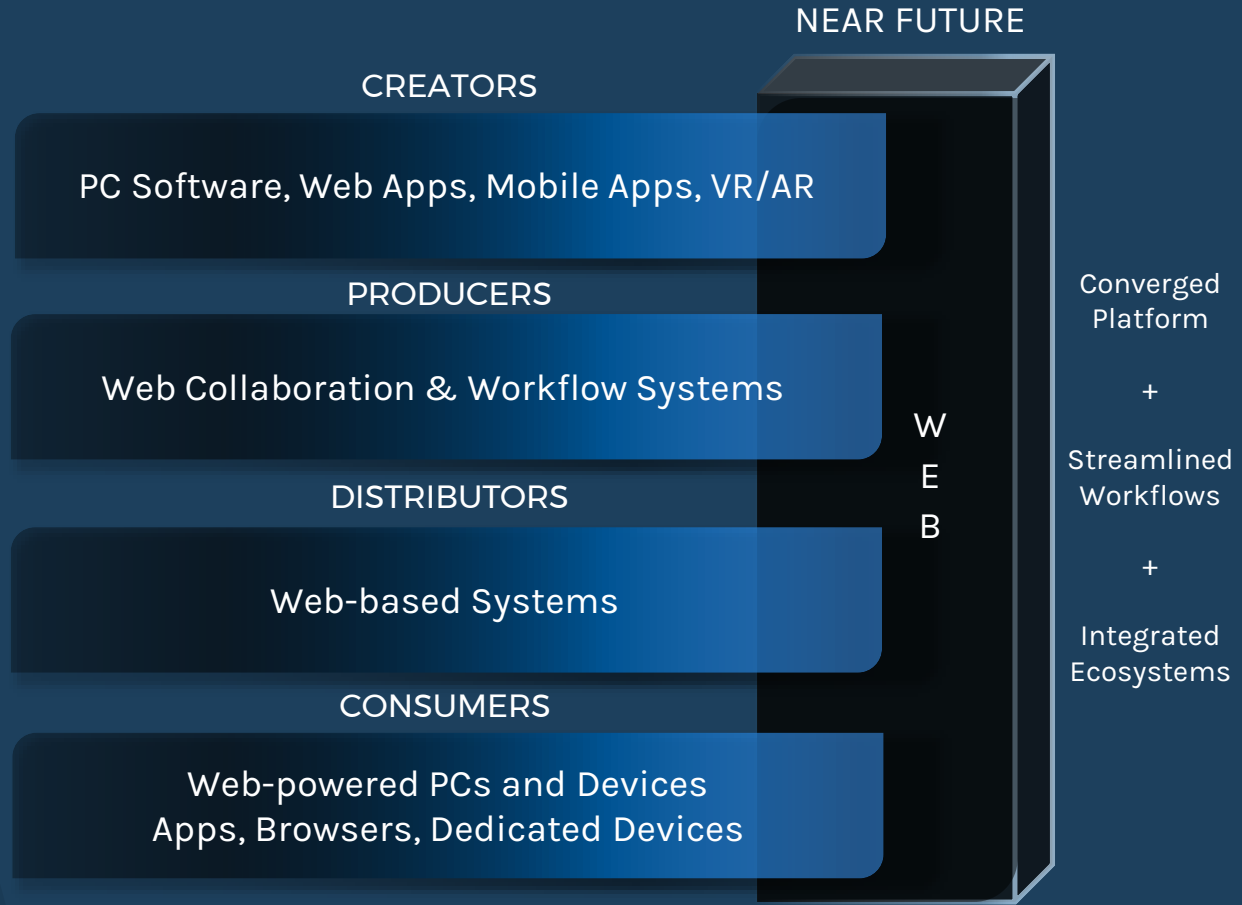
# FRICITIONLESS PUBLISHING VIA WEB STANDARDS

- ▶ The Open Web Platform and its technologies have become essential to how content is created, developed, enhanced, discovered, disseminated, and consumed online and offline
- ▶ The Open Web Platform is becoming a universal “virtual operating system” and information backbone that runs across all computing devices
- ▶ A converged interoperable publishing platform based on Web standards can eliminate remaining friction points in the publishing life cycle
- ▶ A converged interoperable publishing platform has the scale to fully address new business models for publishing





# FRICITIONLESS PUBLISHING: THE VISION



# FRICITIONLESS ECOSYSTEM AND DIGITAL BUSINESS

- ▶ Single format to all channels
- ▶ Web as integration glue across channels
- ▶ Web-based tracking of assets
- ▶ Reliable archival and retrieval
- ▶ Standard means of annotating online
- ▶ Remixing and reuse in other segments





# W3C GROUPS AND STANDARDS RELATED TO FRICTIONLESS PUBLISHING

- ▶ [Publishing WG](#) ([Portable Web Publications](#), EPUB 4)

- Generalizes portable web and EPUB

- ▶ [Publishing BG](#) and [EPUB 3 CG](#)
- ▶ [CSS WG](#) - Styling

- ▶ [Accessibility](#) ([WAI](#), WCAG, etc.)

- ▶ Security

- ▶ Privacy

- ▶ [WebFonts WG](#)

- ▶ Internationalization

- ▶ [Web Platform WG](#) ([HTML](#), [Manifest](#), etc.)



## ... BUT WAIT, **THERE'S MORE**

- ▶ Data on the Web Best Practices, Linked Data, and supporting standards (RDF, OWL, Data Shapes, Geospatial Data, SPARQL, XML/JSON for custom vocabularies)
- ▶ Payments
- ▶ Web of Things
- ▶ Web VR
- ▶ Content integrity and associated rights and permissions can be tracked reliably (Verifiable Claims, Permissions Obligations and Expressions)
- ▶ Related/synergistic verticals: [Entertainment](#), [Automotive](#), Gaming, ...
- ▶ Native-class computing: [Web Assembly](#), [Service Workers](#), JS device APIs, ...



## BROAD PARTICIPATION IS NEEDED

- ▶ The Open Web Platform and Web Standards are fostering the path to frictionless publishing and digital transformation of the publishing ecosystem
- ▶ At the technical level we need everyone's use cases
- ▶ At the business level, there is value for companies if they participate
  - ▶ We are looking at no less than a transformation of the publishing ecosystem



“

You have to skate to where the puck is **going to be**, not where it's been.





**Thanks!**