

# Documents and your Digital Sovereignty

By Michael Meeks

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General Manager



Collabora  
Productivity

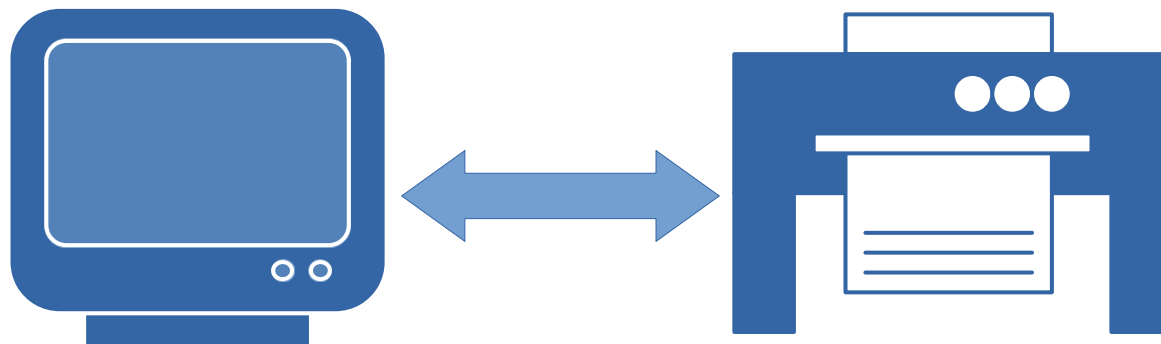
@michael\_meeks michael.meeks@collabora.com

# PCs & Documents:

# The very old days:

## Collaboration:

- Everyone comes & sits around the same CRT
- Or – we print-out & post documents around the world
- I **still** see footers: *“to avoid wasting paper, please don’t print out this E-mail”*

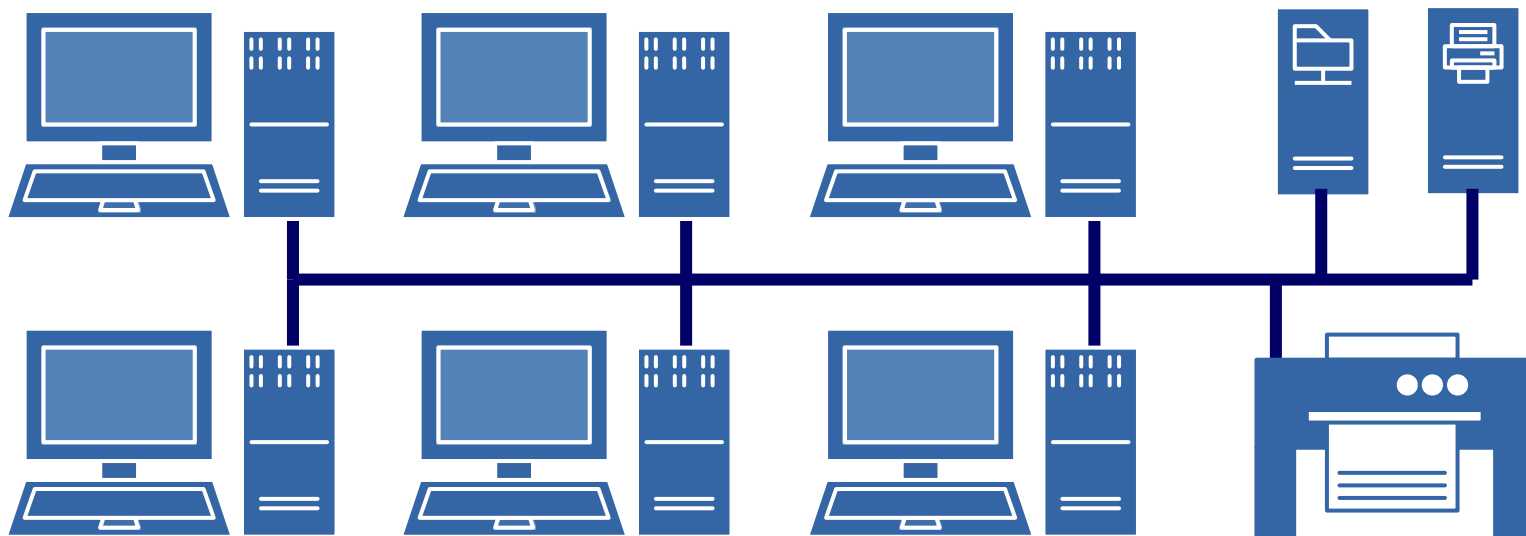


# Netware / NT / network effects ...

**A feast of new networking protocols & standards:**

IPX/SPX, TCP/IP, DCE/SMB, Token-Ring, Ethernet, etc. etc. Storage + Auth ...

**Document data - not standardized: RTF ? - DOC/XLS/PPT**

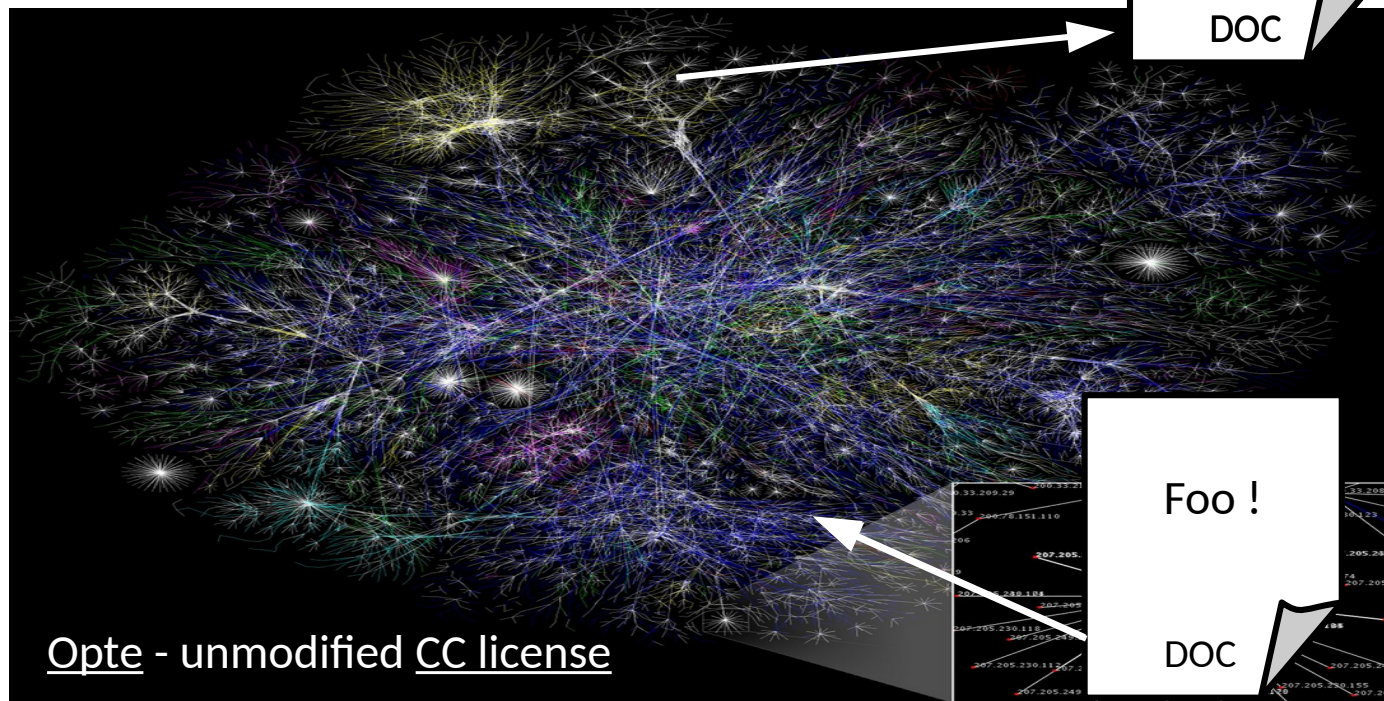




# Global networks & E-mail

E-mail projects standards across the world ... standard protocols

- Plain-text → still migrating to HTML E-mail ... TNEF ?
- Meanwhile attaching Office documents ... what version ?



Opte - unmodified CC license

# The problem of complexity:

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## Rich feature-set

- Extremely complex Microsoft Office file format(s)
  - A historic challenge for interoperability.
  - many **trillion** Office documents extant

## Open Document Format: ODF 2002 → onwards

- Encouraging open-ness, documentation, standardization in file formats!

## Microsoft Open-XML - 2005 → onwards

- Excellent work: codifying decades of curious & arbitrary design decisions
  - multiple, incompatible generations of form technology eg.

**Still getting E-mailed all around the world - ~daily ...**

**Meanwhile the web:**

# The web: an open ISV platform ...

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## Unhelpfully inflammatory:

*"[Netscape will soon reduce Windows to] a poorly debugged set of device drivers."*  
(Marc Andreessen, 1995)

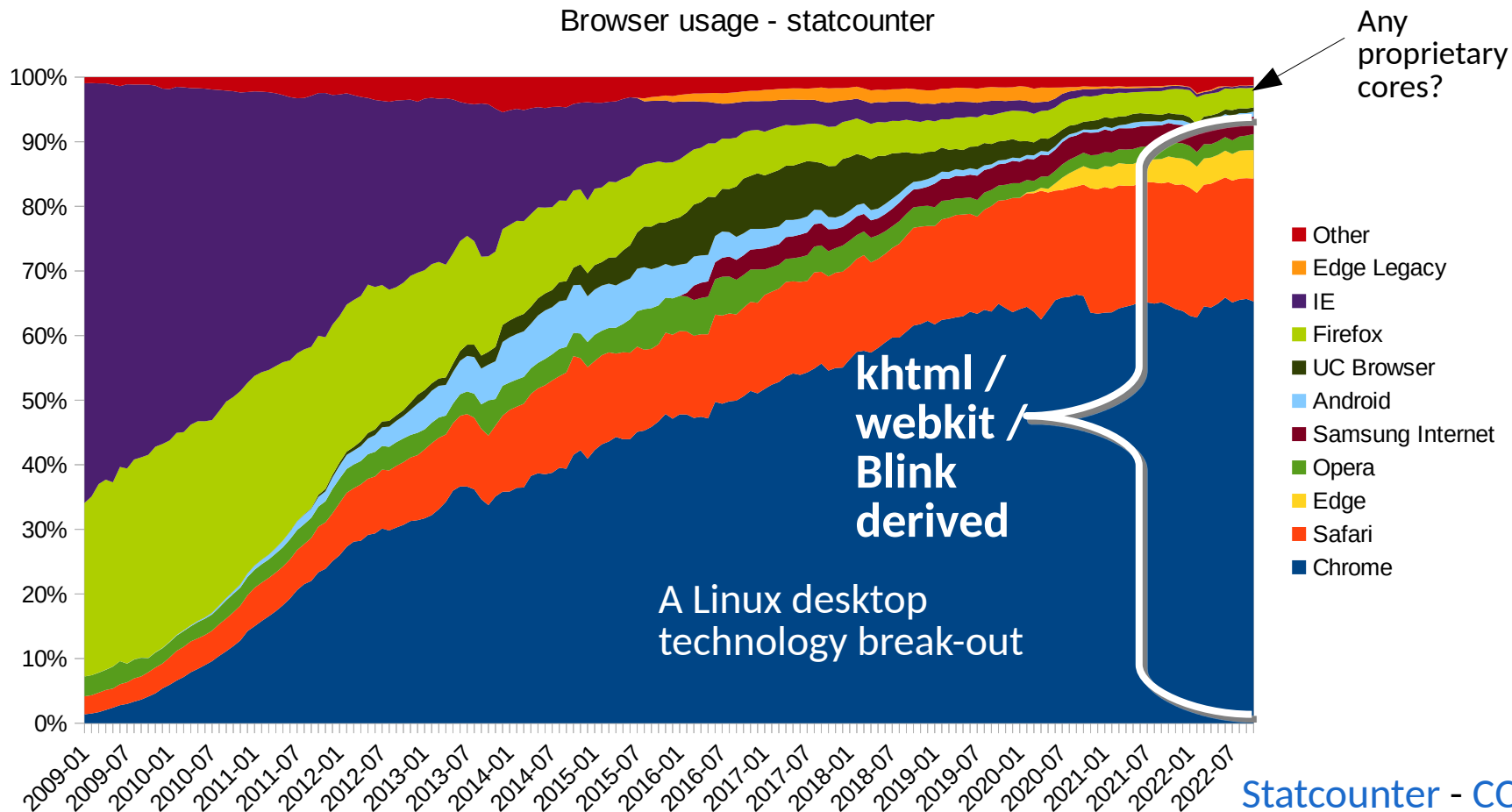
*"We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run."*

Roy Amara - "President of the Institute of the Future".

## The Web APIs: wildly attractive:

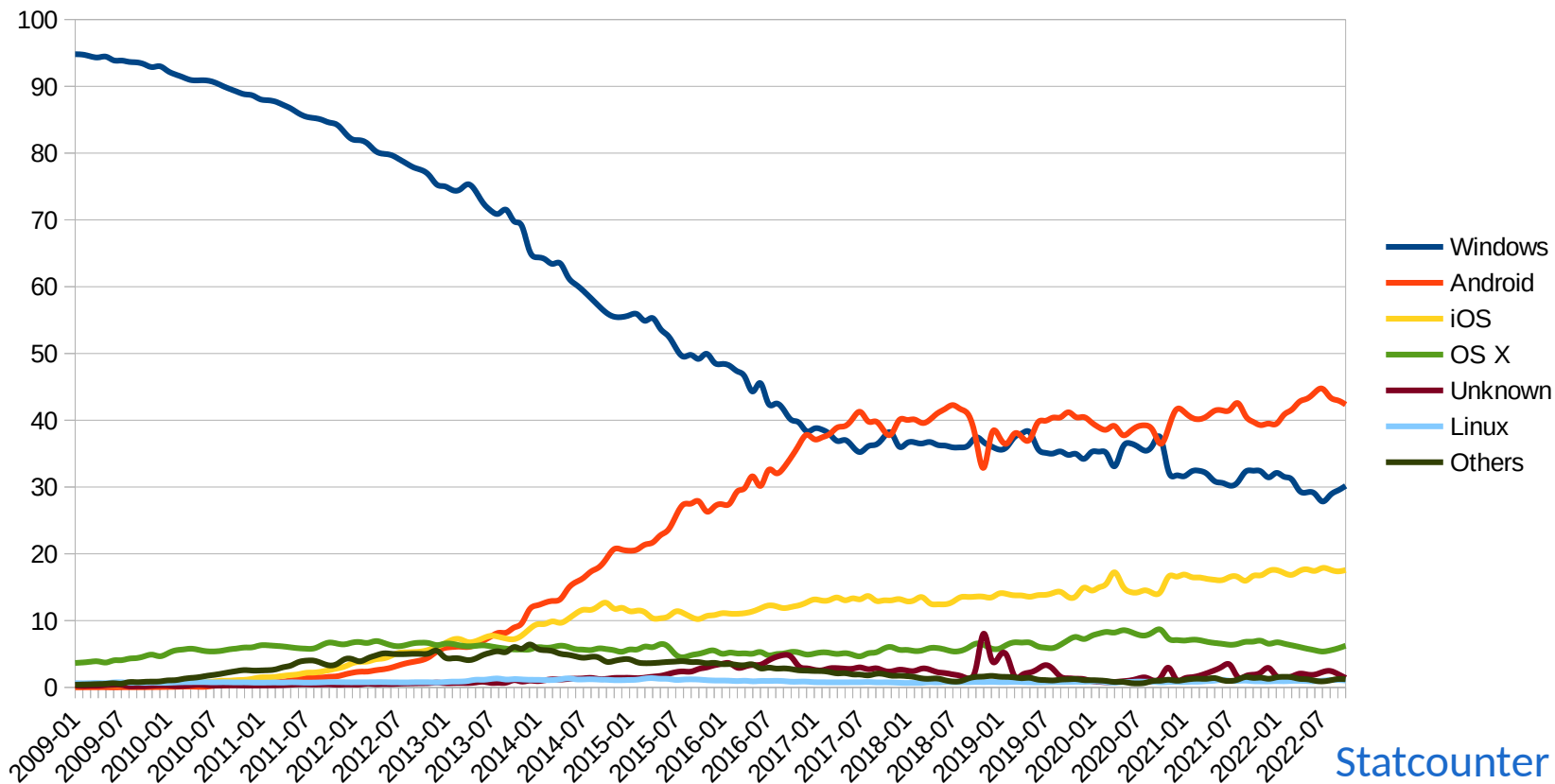
- Cross-platform, cross device form-factor ...
  - by 2012 (15+ years later) → we could even generate & play web-audio !
- Has broken the hold of Windows API for vertical-apps ... web apps everywhere.

# Ad. supported FLOSS: fat PC apps ...



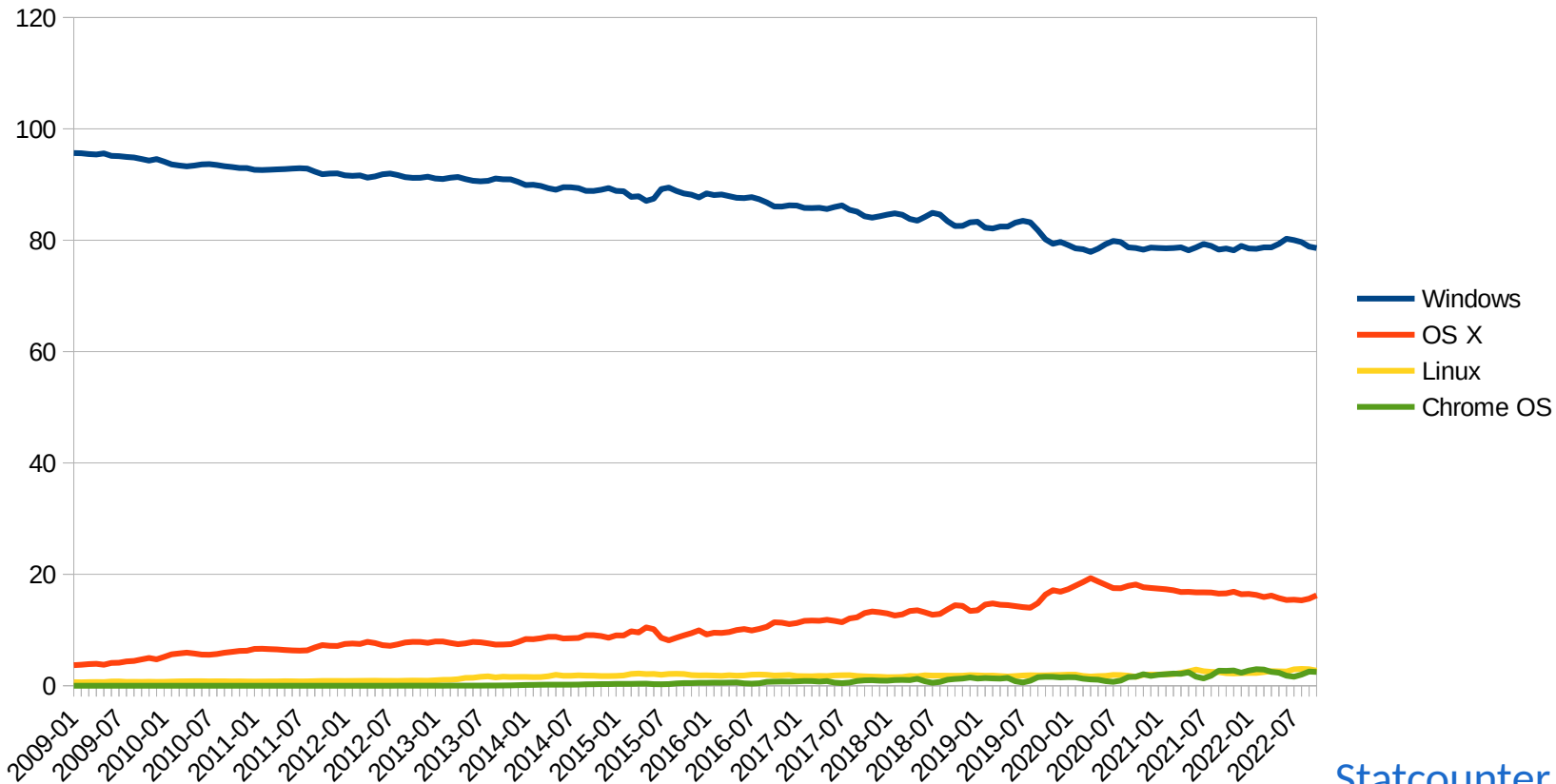
# Devices are changing:

OS market share - statcounter



# Desktops are changing more slowly

Desktop OS - statcounter



**Tied to documents ?**



# Web (standard) offices – HTML5 ...

- Wikis: ~2002 ...
  - Awesome single editor collaboration
  - Learn markdown
  - Write an encyclopedia
- Google Docs: 2006
  - A WYSIWYG CSS thing.
- Office 365: 2011
  - A non-WYSIWYG editor
  - “*Reading View*”
  - “*At last MS Office runs on Linux*” ...
  - The year of the Linux desktop ?

but ...

# MS Office Online tied to Windows:

## Microsoft Word Online



Sorry, Word Online can't open this document for editing because it has document protection enabled for one or more sections. To edit this document, please open it in Microsoft Word.

Tell us about this problem to help us fix it.  
[Give feedback to Microsoft](#)

Session ID: 735838fd-b0c7-4534-8d07-84df8f1158b9

Edit in Word

Open in Reading View

## Microsoft Word Online

Sorry, Word Online can't open this document because it's too big.

Tell us about this problem to help us fix it.  
[Give feedback to Microsoft](#)

Session ID: 9b5be095-bcc2-497b-984a-9b5d865174ee

Edit in Word

Open in Reading View

## Microsoft Word Online



Sorry, Word Online ran into a problem while opening this document. To view this document, please open it in Microsoft Word.

Session ID: bd60564a-5cbb-4d12-82b3-2496bf8eba30

Edit in Word



## Edit in Word

Use the full functionality of Microsoft Word.



## Edit in Browser

## Couldn't Open the Workbook



Sorry, we can't open your workbook in Excel Online because it exceeds the 5 MB file size limit.

You'll need to open this in Excel.

[Learn more](#)

Open in Excel

## Edit a Copy?



To edit this in your browser, we will create a copy that doesn't include unsupported features.

To edit this workbook with all of its features, click Cancel and open it in Excel.

[Learn more](#)

Edit a Copy

Cancel

## Compatibility Report



We can't show these features in the browser:

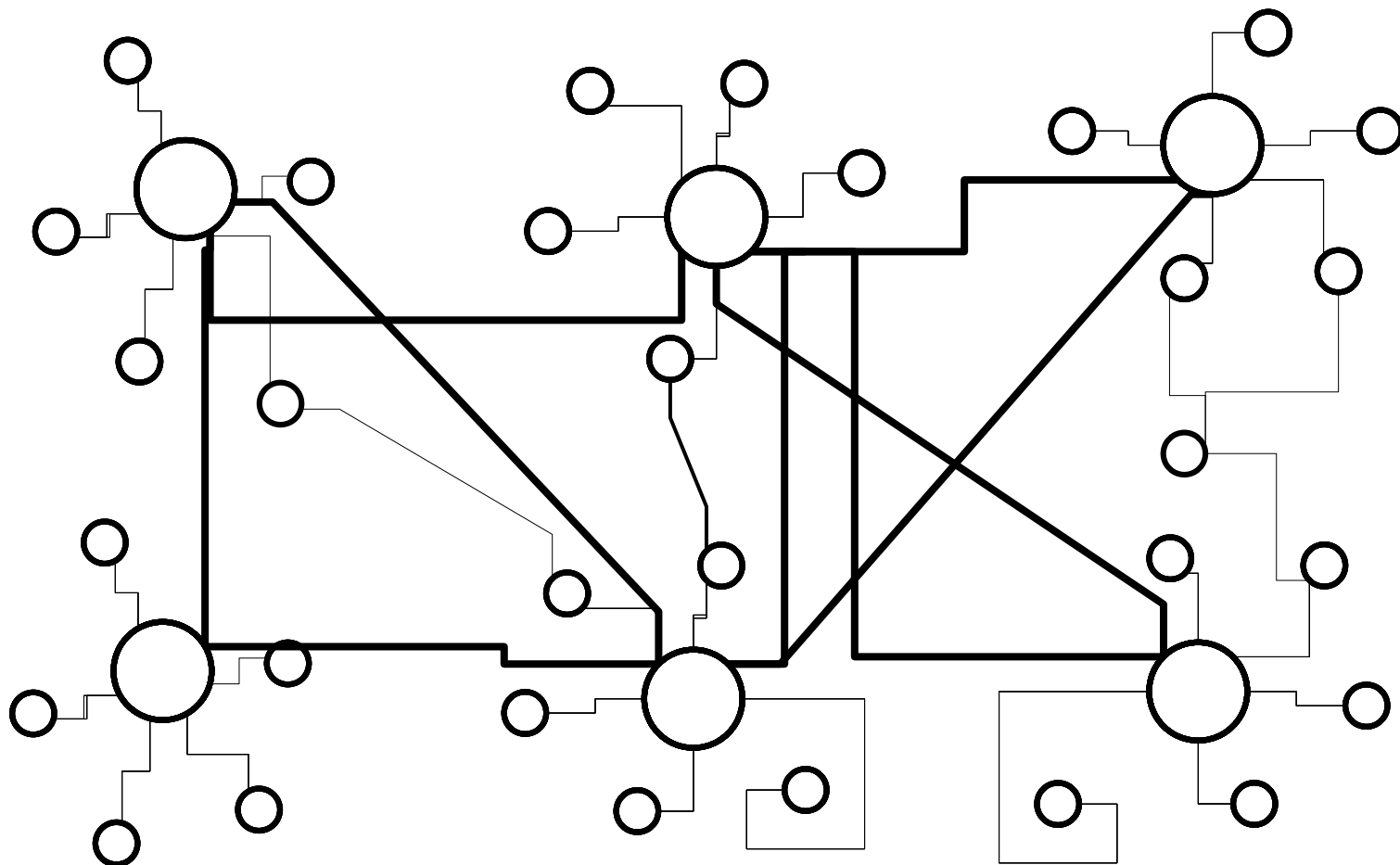
- Shapes or other objects
- SmartArt (process, hierarchy, cycle and relationship diagrams)

But you can see all the content in this workbook by opening the file in Excel.

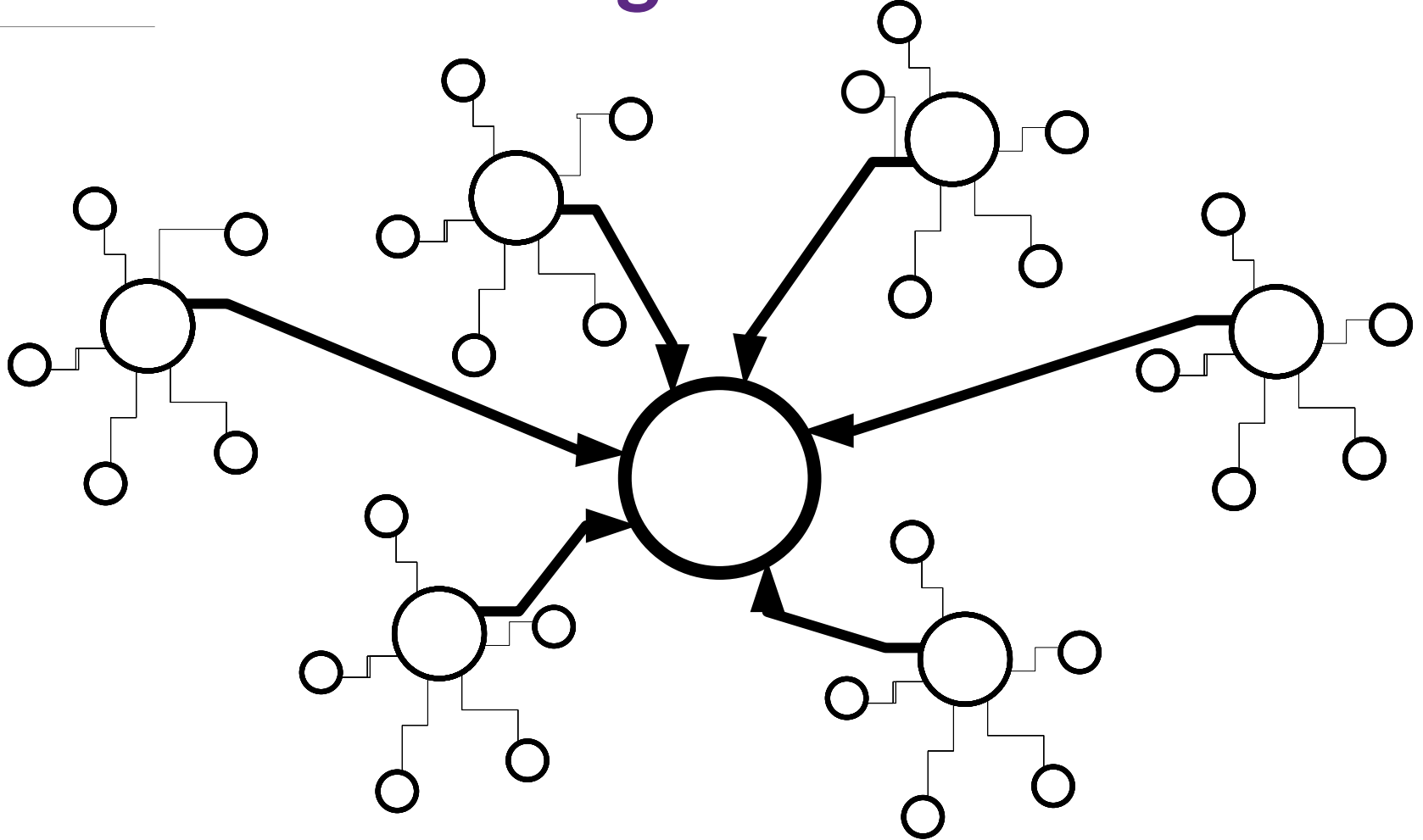
[Learn more](#)

OK

# A dream of robust, peered networks

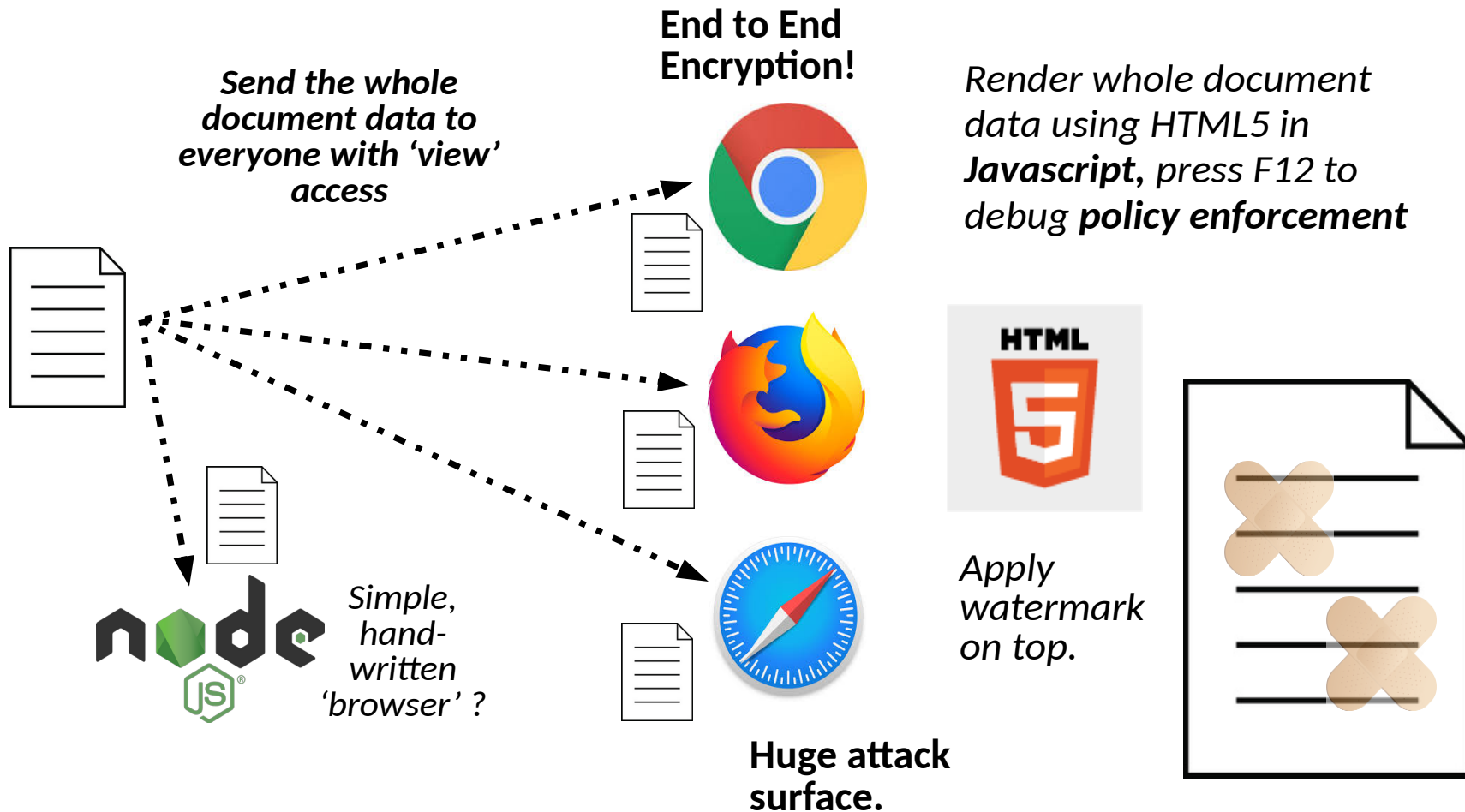


# Document data gets centralized:



**Encryption & DRM ...**

# How not to do it: (but oddly popular)

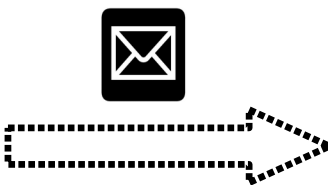
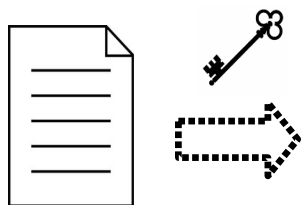


# Central Digital Rights Management

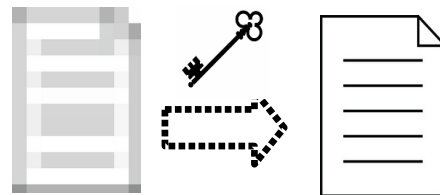
How can we show people a document, and control their access: ?

- e.g. disable copy/paste, print, save-as, control views etc.

**Step 1:** encrypt the document

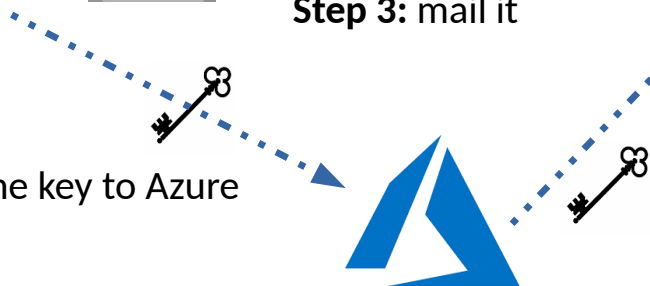


**Step 3:** mail it

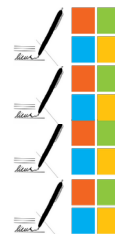


**Step 4:** check **system** and **app** is fully **signed**, and policy is ok & Decrypt document.

**Step 2:** send the key to Azure



MS sign / revoke from bottom up



# Real Secure View: send watermarked pixels ...

## ☒ Enable Secure View

Set default share permissions for all users (available for shares without edit permission)

☐ can print/export

☒ Secure View (with watermarks)

Set watermark text for Secure View. To include the user email address dynamically, use the {viewer-email} variable. Click outside the text field to

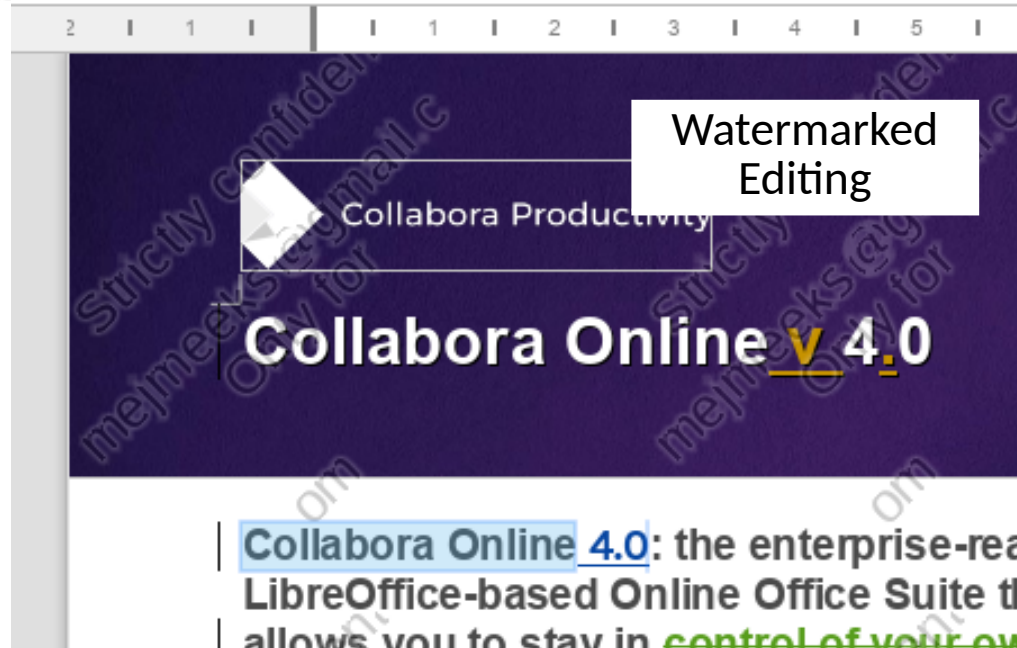
Strictly confidential. Only for {viewer-email}

**Simple, Elegant, Federated**

**No central points of failure:  
corporate or technical**

## Granular permissions

- Edit, Print, Share, Download
- Watermarked PDFs if printing is allowed.





**Ideally:**

*secure, on-premise, federated,  
interoperable, powerful,  
web based collaboration  
easy to deploy & scale,  
fast & pretty*

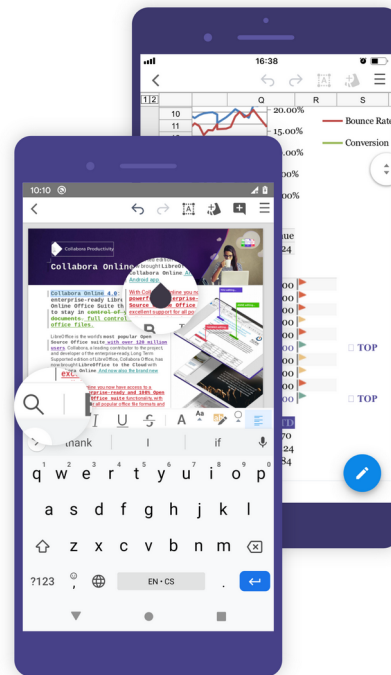
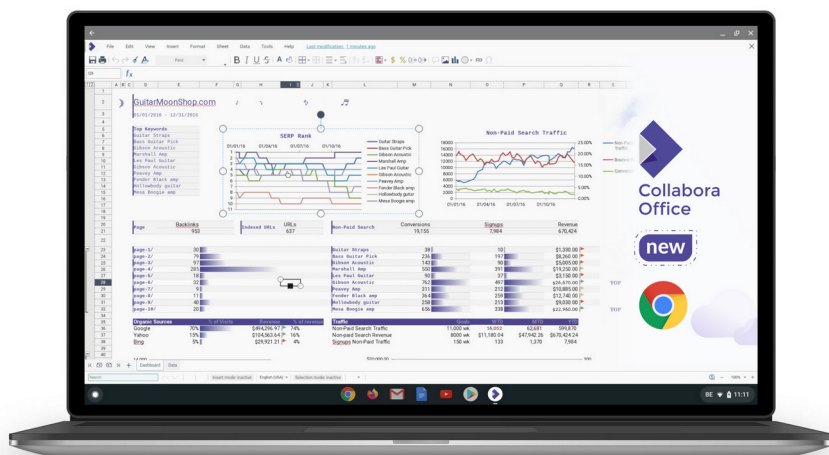


# Collabora Online

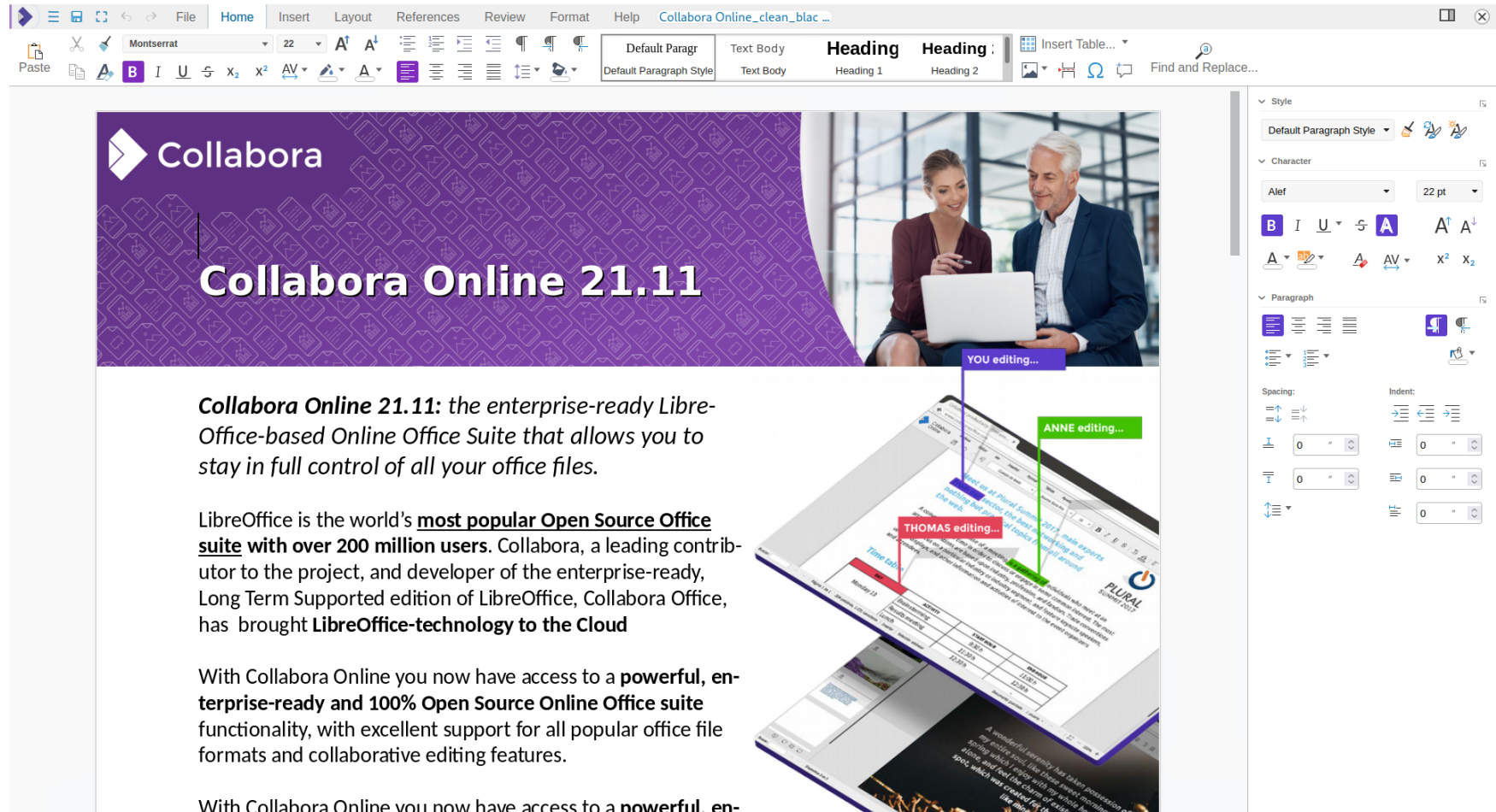
*Built with awesome LibreOffice Technology*

Rich, FOSS, secure, interoperable, collaborative documents,  
on-premise ...

Let me show you some pixels:



# Collaborative Writer



The screenshot displays the Collabora Online 21.11 web interface. The top menu bar includes File, Home, Insert, Layout, References, Review, Format, and Help. The toolbar shows various editing tools like Paste, Bold, Italic, Underline, and more. The main content area features a purple header with the Collabora logo and the text "Collabora Online 21.11". Below this, a paragraph describes the suite as an enterprise-ready LibreOffice-based Online Office Suite. A second paragraph mentions LibreOffice's popularity and Collabora's role as a contributor. A third paragraph highlights the suite's powerful, enterprise-ready, and 100% Open Source functionality. A fourth paragraph states that the suite provides access to a powerful, enterprise-ready, and 100% Open Source Online Office suite. The interface also shows a document with collaborative editing features, including a "YOU editing..." label and a "THOMAS editing..." label. A sidebar on the right contains a "Style" panel with options for Default Paragraph Style, Character, and Paragraph, and a "Spacing" panel with options for Indent and Spacing.

**Collabora Online 21.11**

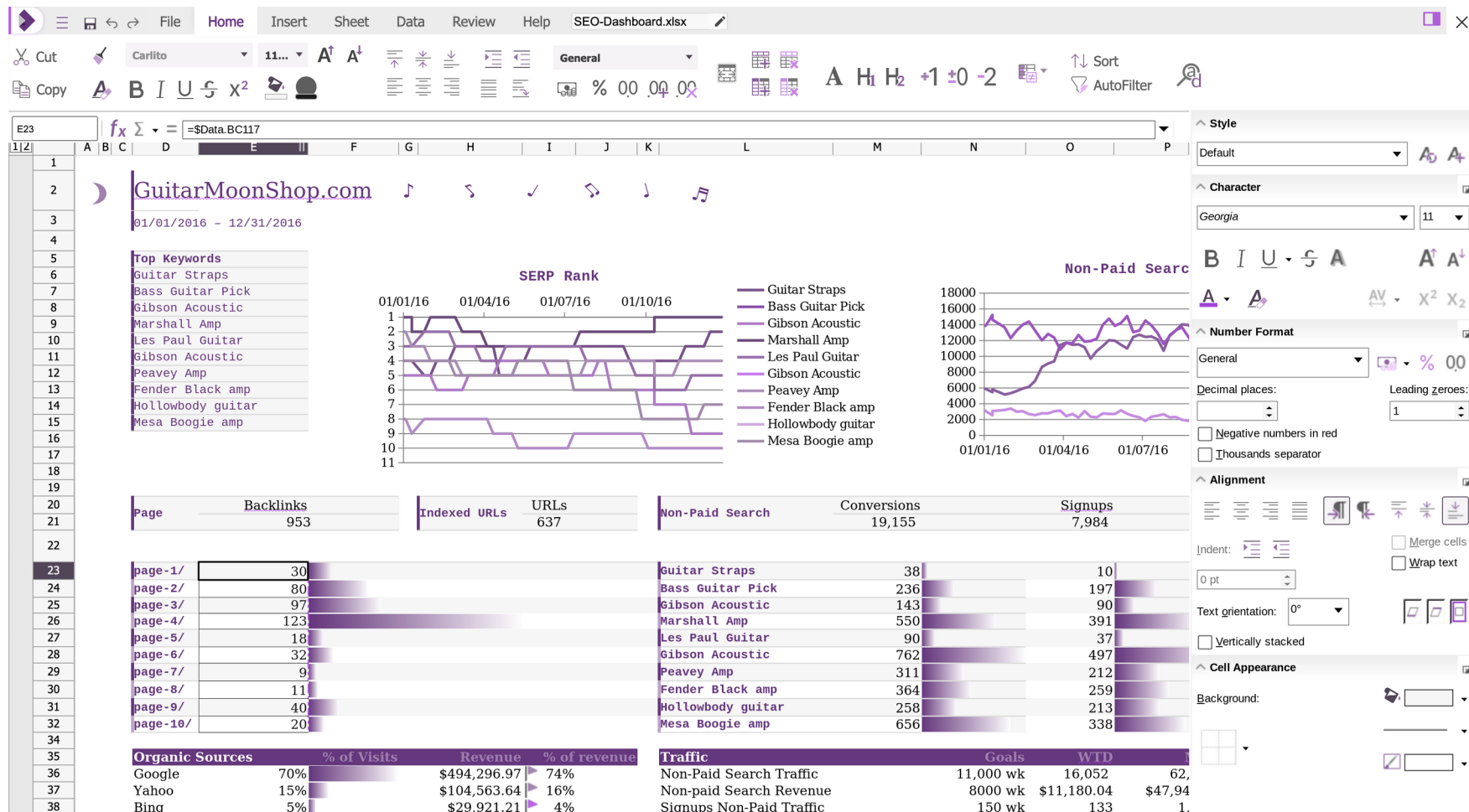
*Collabora Online 21.11: the enterprise-ready LibreOffice-based Online Office Suite that allows you to stay in full control of all your office files.*

LibreOffice is the world's **most popular Open Source Office suite with over 200 million users**. Collabora, a leading contributor to the project, and developer of the enterprise-ready, Long Term Supported edition of LibreOffice, Collabora Office, has brought **LibreOffice-technology to the Cloud**

With Collabora Online you now have access to a **powerful, enterprise-ready and 100% Open Source Online Office suite** functionality, with excellent support for all popular office file formats and collaborative editing features.

With Collabora Online you now have access to a **powerful, enterprise-ready and 100% Open Source Online Office suite** functionality, with excellent support for all popular office file formats and collaborative editing features.

# Collaborative Spreadsheets



# Collaborative Drawing

CollaboraOnline\_21-11\_Impr...

File Home Insert Layout Review Format Draw Help

Position and Size... Flip Vertically Flip Horizontally Enter Group Exit Group Text Box Connectors Vertical Text

Collaborative Presentations

Collaborative Drawings

Collabora Online 21.11

Glow & Soft Edge Effects on Shapes

Collabora Office

Collabora Office: Desktop Editing

Collabora Office: Mobile Editing

Collabora Office: Chrome OS

Collabora Online

## Glow & Soft Edge Effects on Shapes

Original shape

Glow & Soft Edge effect applied

10

Character

Paragraph

Area

Fill: Color

Transparency: None

Effect

Glow

Radius: 8 pt

Color: Light Gray 4

Transparency: 0

Soft Edge

Radius: 8 pt

Shadow

Line

Line: [Line Style]

Width: [Width]

Color: [Color]

Transparency: 0

Corner style: Rounded

Cap style: Flat

Position and Size

Position X: 6,85

Position Y: 2,05

Width: 2,95

Height: 2,95

# Collaborative Presentations

The screenshot displays the Collabora Online presentation application. The main slide, titled "2021 - All about COOL days Collabora Online", focuses on "Setting up your own Collabora Online" by Aron Budea, a QA Engineer at Collabora Online (aron.budea@collabora.com). The slide content includes sections for "Starting resources", "Starting out simple", "Collaboration / Site / Subsite / Subsite?", "Customizing the setup", "Docker container", "Reverse proxy & load balancing", and "Verifying running service". The interface features a top menu bar with tabs like File, Home, Insert, Layout, Review, Format, and Help. A toolbar below the menu offers various editing tools such as Duplicate Page, Set Background Image, Slide Layout, Full Screen, Zoom Out, Zoom In, Master Slides, Slide Transition, Animation, and a Master View button. On the right, a "Slide" panel allows for format adjustments (Screen 16:9, Landscape, None) and master slide selection (First\_Slide). A "Layouts" panel on the bottom right shows a grid of 16 different slide layout templates.

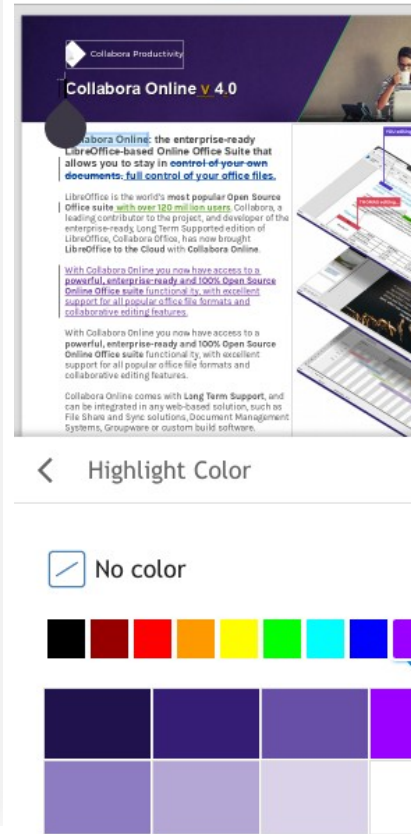
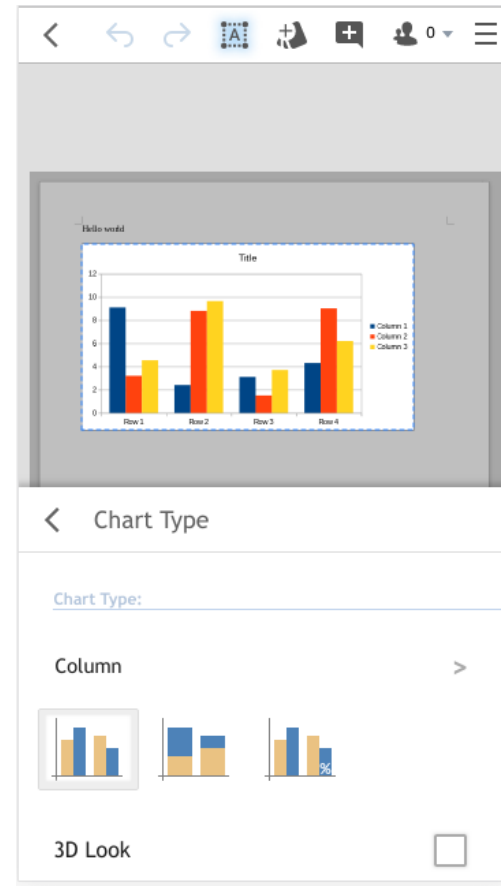
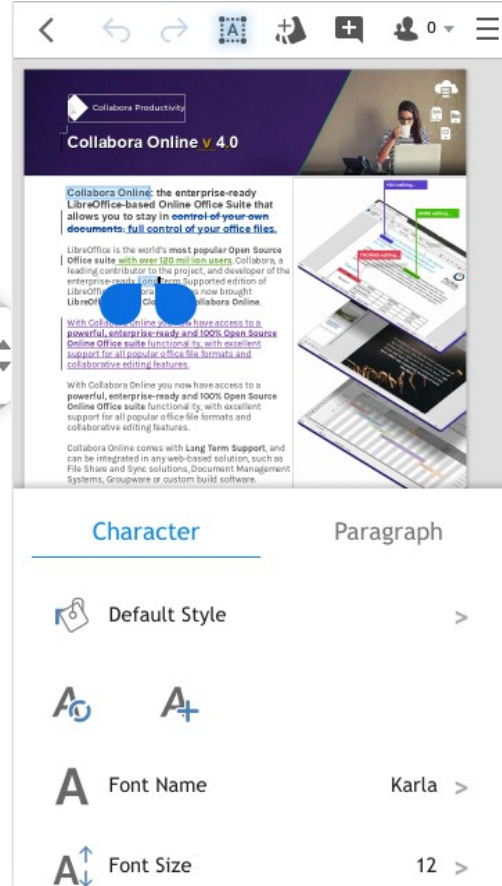


# Mobile app / responsive UI for apps:

750k  
installs

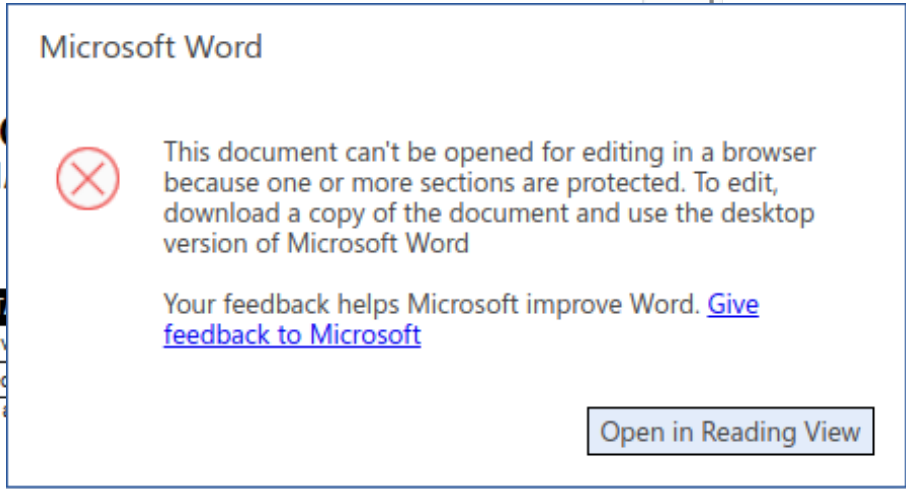
Available for iOS, Android & Chrome OS

With Collabora Online you now have access to a powerful, enterprise-ready and 100% Open Source Office suite functional, with excellent support for all popular office file formats and collaborative editing features.



perso

- tab through editable fields; skip protected sections






# Writer: Rich Fields support ...

## Fill out your DOC / DOCX forms

- tab through editable fields; skip protected sections

person

Form C1



## INWARD REPORT (SHIPS AND BOATS OTHER THAN SMALL CRAFT)

Te Mana Arai o Aotearoa

| PART A: ARRIVAL DETAILS       |   |
|-------------------------------|---|
| Name of ship                  | Port of arrival                                 |
| Date of arrival               | Port arrived from                               |
| Name of person in charge      | Name and address of ship's agent in New Zealand |
| IMO number                    |   |
| Gross register tonnes         |   |
| Period of stay in New Zealand |   |

# Excellent Microsoft Interoperability

- **Most mature code base** outside Microsoft
  - More than 8 million lines of code...
- Continue working with your **existing MS file formats**
  - DOCX, DOC, RTF, XLSX, XLS, PPTX, PPT
- **Not only Microsoft** → PDF, Visio, Publisher, Keynotes, Numbers, Pages + many more
- **“100% interoperability”** – not a credible claim
  - **Interoperability** – a mix of: import, rendering, feature-set, export
  - To edit you have to **understand the format** – no reliable short-cuts.
- Unparalleled migration of legacy file-formats

# VBA – automation for the masses ...

Without needing to ask anyone you can (still):

‘ Examples of deprecated pre-Word (19)97 basic compatibility use:  
 WordBasic.ScreenUpdating 0  
 WordBasic.StartOfDocument  
 WordBasic.ViewPage  
 case 42: WordBasic.MsgBox "Could not find file " + filepath\$ + "."

**Continue to use your  
ancient APIs today**

**Directly use COM API:**

```
Set oWshShell = CreateObject("Wscript.Shell") ' New IWshRuntimeLibrary.WshShell
```

**Hook windows DLLs:**

```
Private Declare Function QueryPerformanceCounter Lib "kernel32"  
    (lpPerformanceCount As LARGE_INTEGER) As Long
```



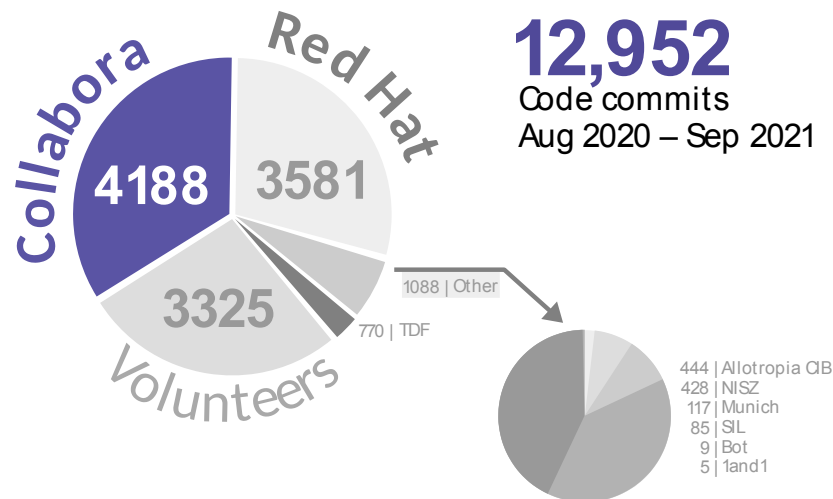
# Built on LibreOffice Technology



- 200+ million LibreOffice user-base
- ~1000 people helping to develop LibreOffice
  - 100 localization teams
- Product developed in public: outer-source



**Berlin: Federal Ministry of  
Economics and Technology**



**City of Rome: Capitol Hill**



# Security

*the powerful, flexible way*

# Digital Sovereignty: don't leak your data

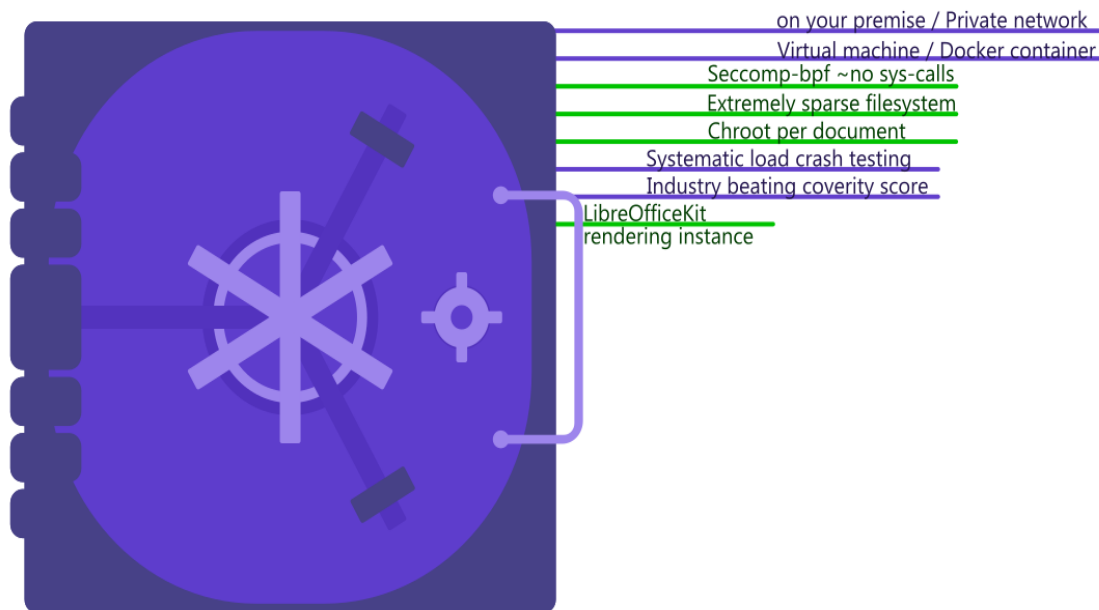
Security is provided via several layers:

- Document data is held in your server room.
- Not sent to every single device to be controlled by the browser + JS + local debugger.
- We send pixels.

**Continual active fuzzing**

- Google' OSS-fuzz

**Coverity static checking**



# Digital Sovereignty ...

- Control of:
  - Software – FLOSS
  - CPU / execution
  - Network
- Privacy & Robustness
  - Don't let your data leave your site
- Don't fear the 3G's
  - Germs
  - Geopolitics
  - GDPR
- Take back control of key workflows & feature-function.

# Conclusions

- **Documents:**
  - one of the oldest migration blockers.
  - Now with a compelling solution
- **Recovering control**
  - Get back your data, workloads and documents
- **Look forward to liberty**
- **Checkout CODE:**
  - <https://www.collaboraoffice.com/code/>
  - latest features & fixes
  - 100% open-source code
  - no limits.
- **Get involved with LibreOffice**

*Oh, that my words were recorded, that they were written on a scroll, that they were inscribed with an iron tool on lead, or engraved in rock for ever! I know that my Redeemer lives, and that in the end he will stand upon the earth. And though this body has been destroyed yet in my flesh I will see God, I myself will see him, with my own eyes - I and not another. How my heart yearns within me. - Job 19: 23-27*





Fin.

**Open Source,  
Open First**