

Content design systems — 7 lenses from GOV.UK

Hi, I'm Rik Williams 🧐👋



Government
Digital Service



Department for
Science, Innovation
& Technology

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Government Digital Service

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Information Architecture



User Research



Inclusive Design

2007

City, University of London

University College London

Raleigh International

Alzheimer's Society

Moorfields Eye Hospital

GDS

2025

Session structure

GOV.UK context — 10min

7 lenses (design tradeoffs) — 20min

Chat — 5min

GOV.UK context

GDS is the digital centre of
the British government.

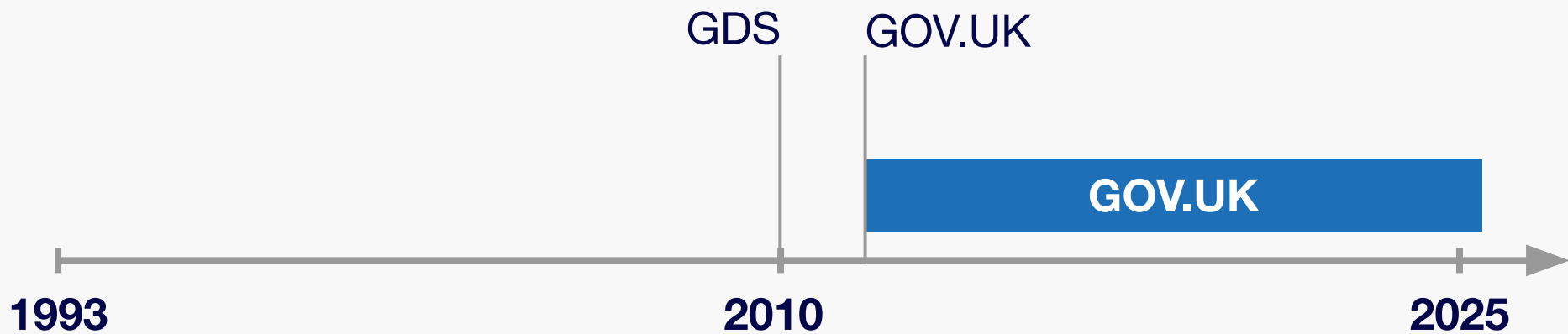
We serve the public, central government departments and the wider public sector.

And we design, build and
deliver its user experience.



GOV.UK

**The best place to find
government services
and information**



Replaced over

1,800

separate
domains

9:41



▼ Menu

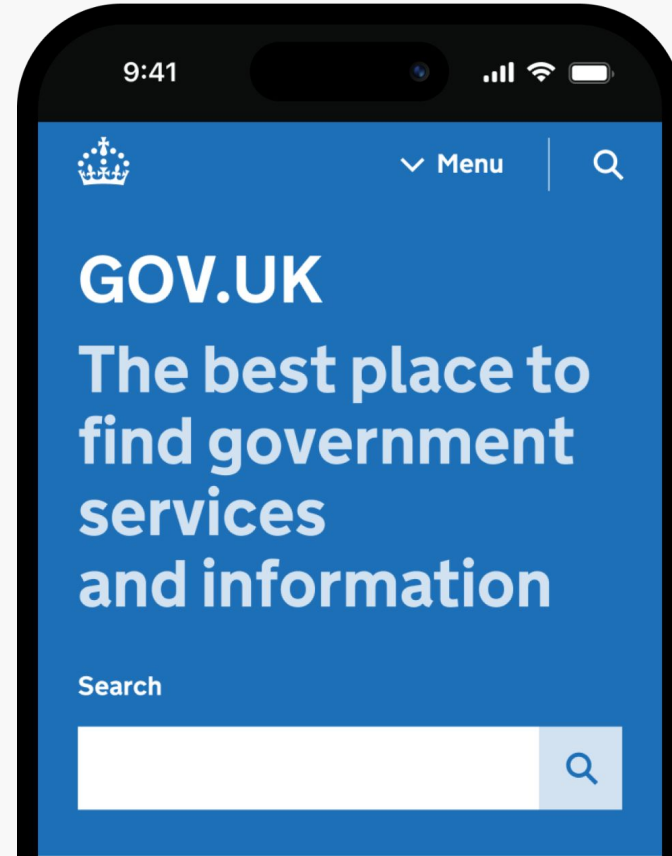


GOV.UK

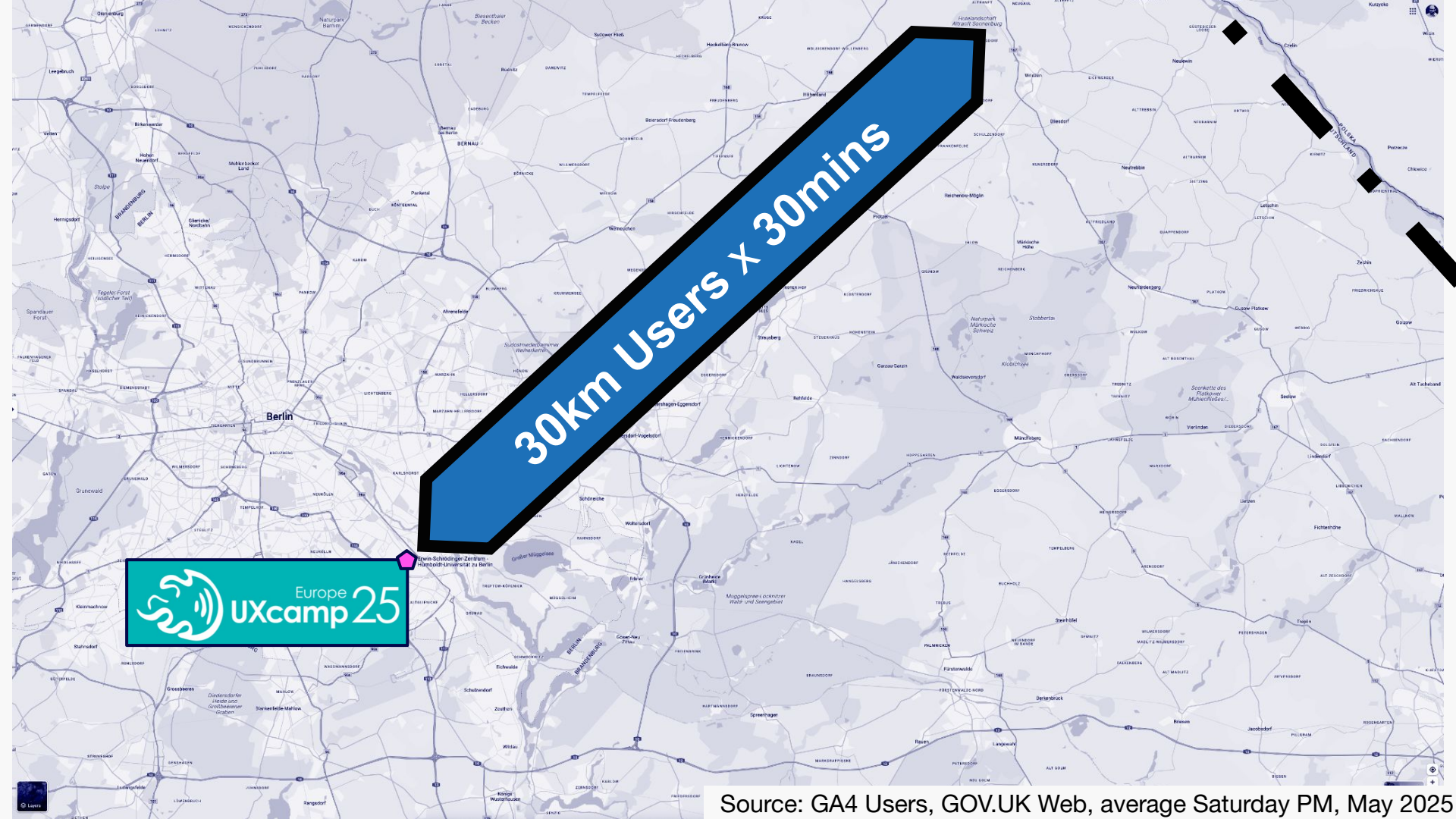
**The best place to
find government
services
and information**

Search

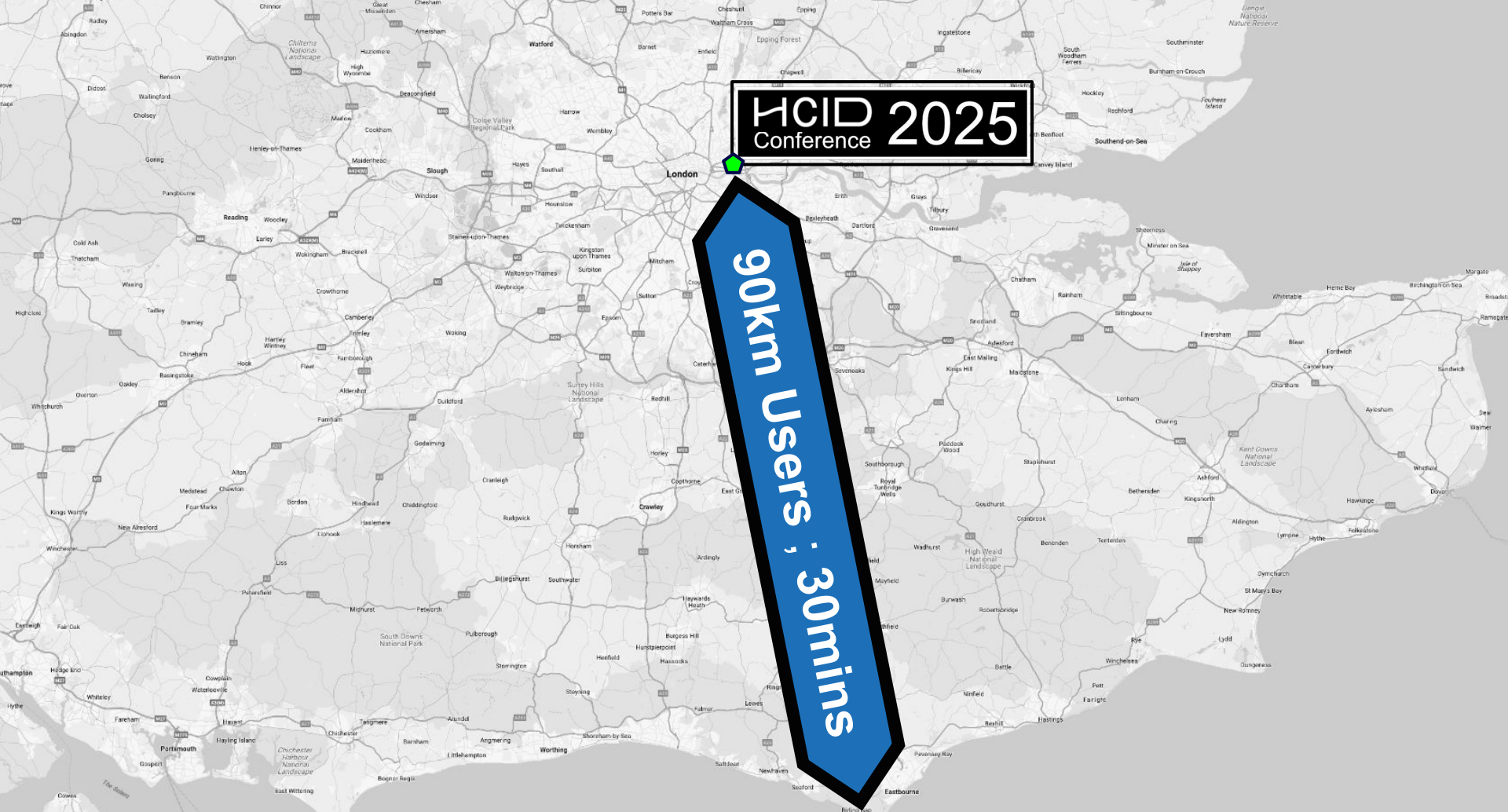




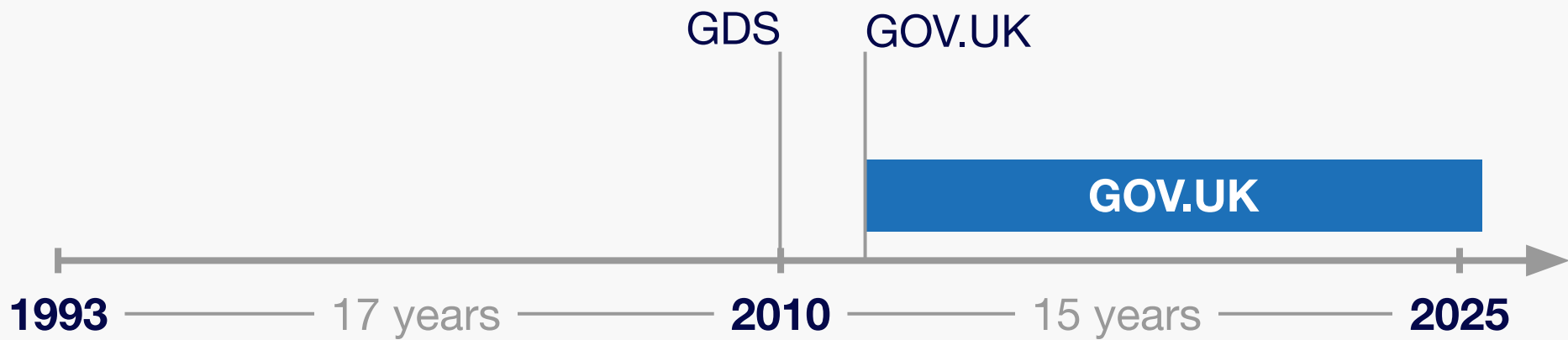
1. Google
2. YouTube
3. BBC
4. Facebook
5. Amazon
6. Wikipedia
- 7. GOV.UK**
8. Reddit
9. Bing
10. Instagram

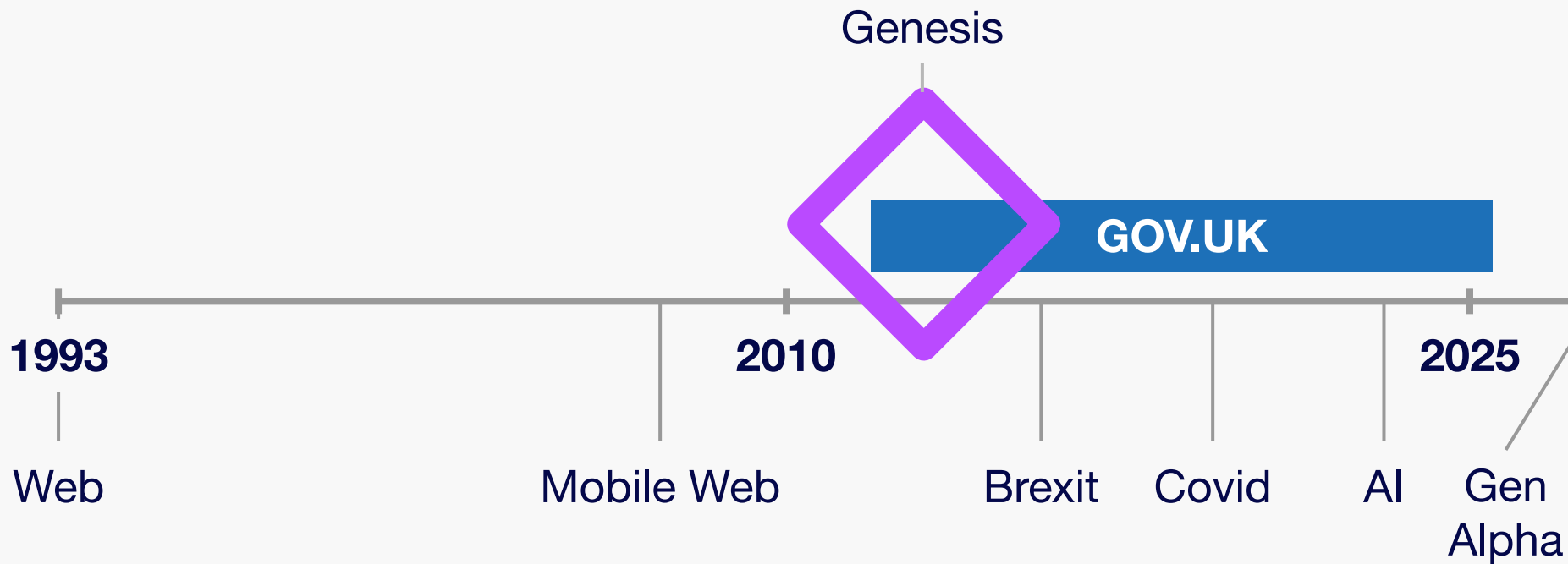


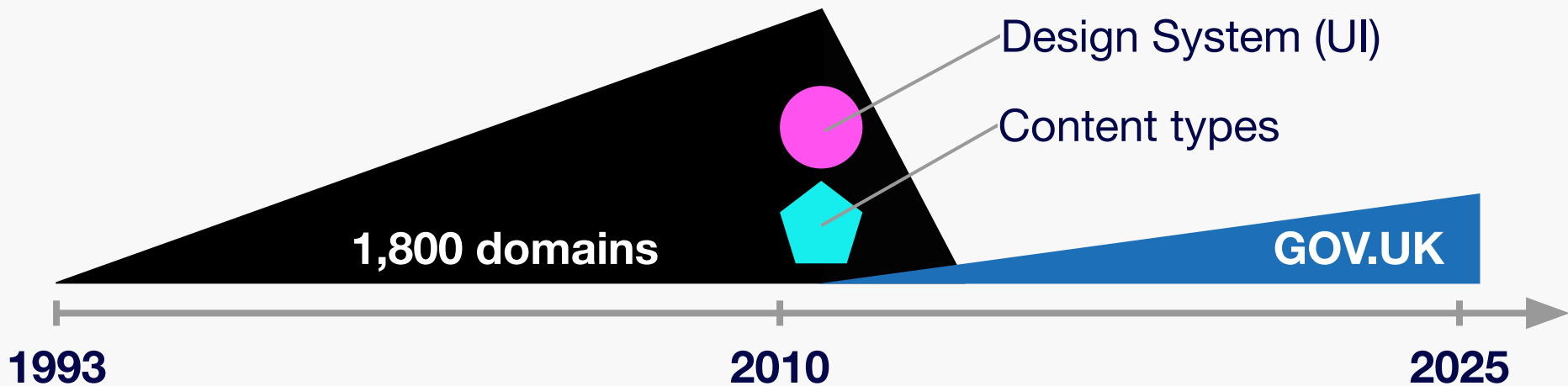
Source: GA4 Users, GOV.UK Web, average Saturday PM, May 2025



Source: GA4 Users, GOV.UK Web, average weekday PM, June 2025







“We want to **grow** GOV.UK to reach people **when** and **where** they need government information [...and] evolve to match user expectations for **new technologies**”

GDS Strategy

GOV.UK

Web

passive, designer-led content

Chat

active, user-led content

App

personalised content

2025

Epic scale (3m Users / day)
Single channel (not multi)
Page-based (custom content)
UI design system (mature)
Content types (simple)

On design systems...



“A collection of reusable components, guided by clear standards, that can be assembled together to build any number of applications.”

Jina Anne



Accessible



Adaptable



Consistent



Cohesive



Efficient



Modular



Multichannel



Robust

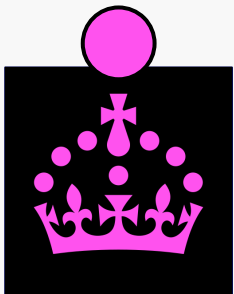





Scalable



Content design systems

(not content design *in* design systems)



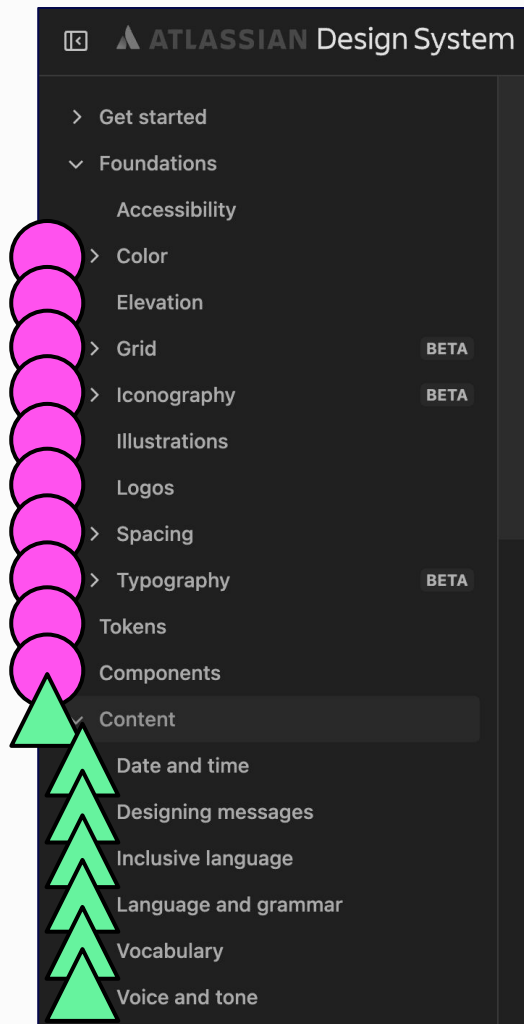
**Vitaly Friedman**  • 2nd
Practical insights for better UX • Running "M...
1w • 

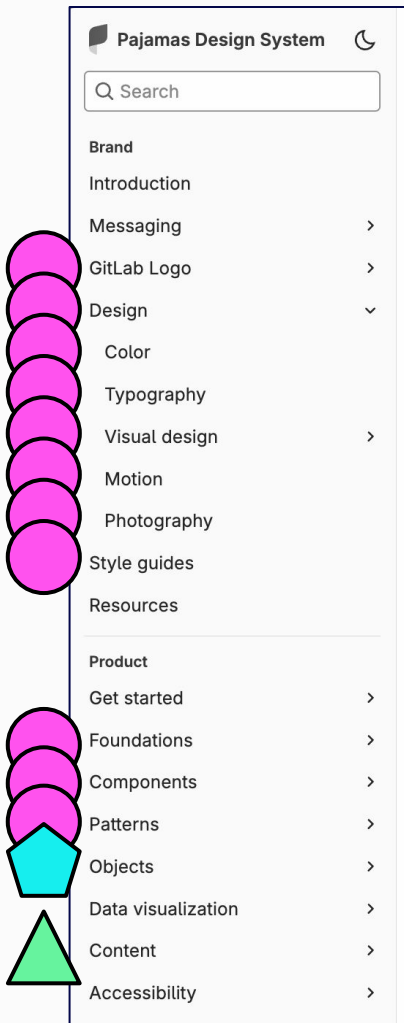
[+ Follow](#) ...

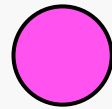
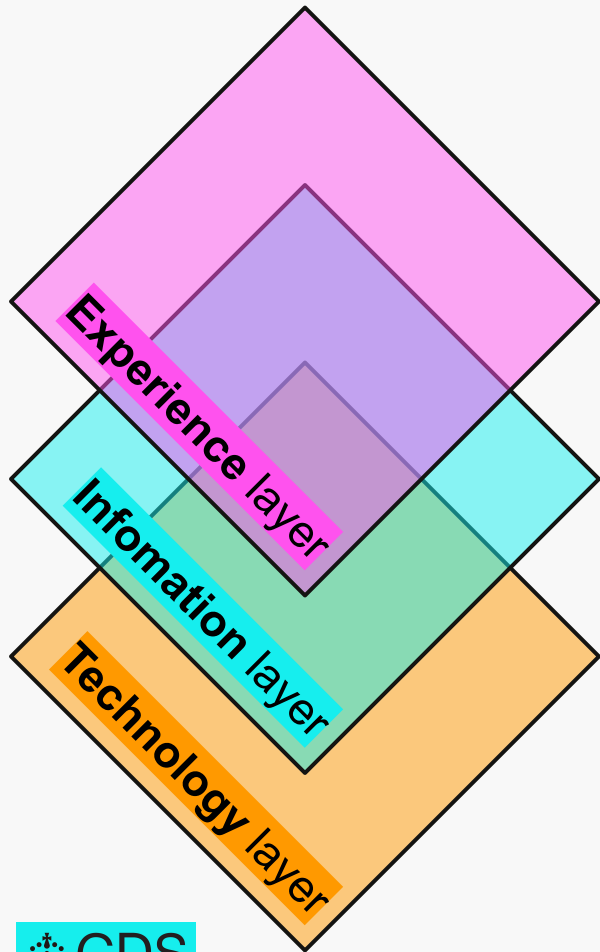
♣ Content Design in Design Systems

Atlassian: <https://lnkd.in/eGpzQqm4>
Amplitude: <https://lnkd.in/eaB85T7n> 👍
Buffer: https://lnkd.in/e3P_EZFN
DHL: <https://lnkd.in/eF494fkT> 👍
Duolingo: <https://lnkd.in/egCSX9At>
Girlguiding: <https://lnkd.in/eEBiXX6d> 👍
Goldman Sachs: <https://lnkd.in/e5x7BuPt>
Gov.uk: <https://lnkd.in/ekRadXad>
JSTOR: <https://lnkd.in/eAnyrtcu> 👍
MetLife: <https://lnkd.in/evVE8sqf>
Monzo: <https://lnkd.in/edVV8QWz>
NASA: <https://lnkd.in/eM637kfD>
NHS: <https://lnkd.in/eYK3QMa2> 👍
Progressive's: https://lnkd.in/evx_8bzY 👍
Schibsted: https://lnkd.in/et_BXg6R
Shopify: <https://lnkd.in/eAKgEHNW>
Skrill: <https://lnkd.in/e2HGTq4q> 👍
Slack: <https://lnkd.in/ejZ2QtJa>
Zendesk: <https://lnkd.in/euxijT5m> 👍
Wise: <https://lnkd.in/eWk-Mvf9>

♣ Useful resources







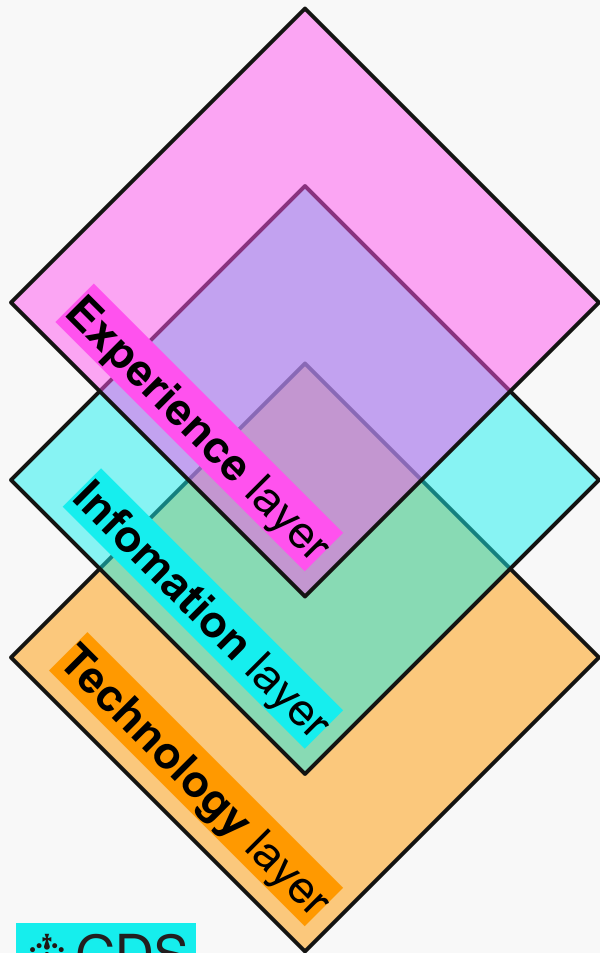
UI design system(s) (packaging)





content design system (user value)




code design system(s) (scaffolding)



— systemised content **informs**

 
Front-end design

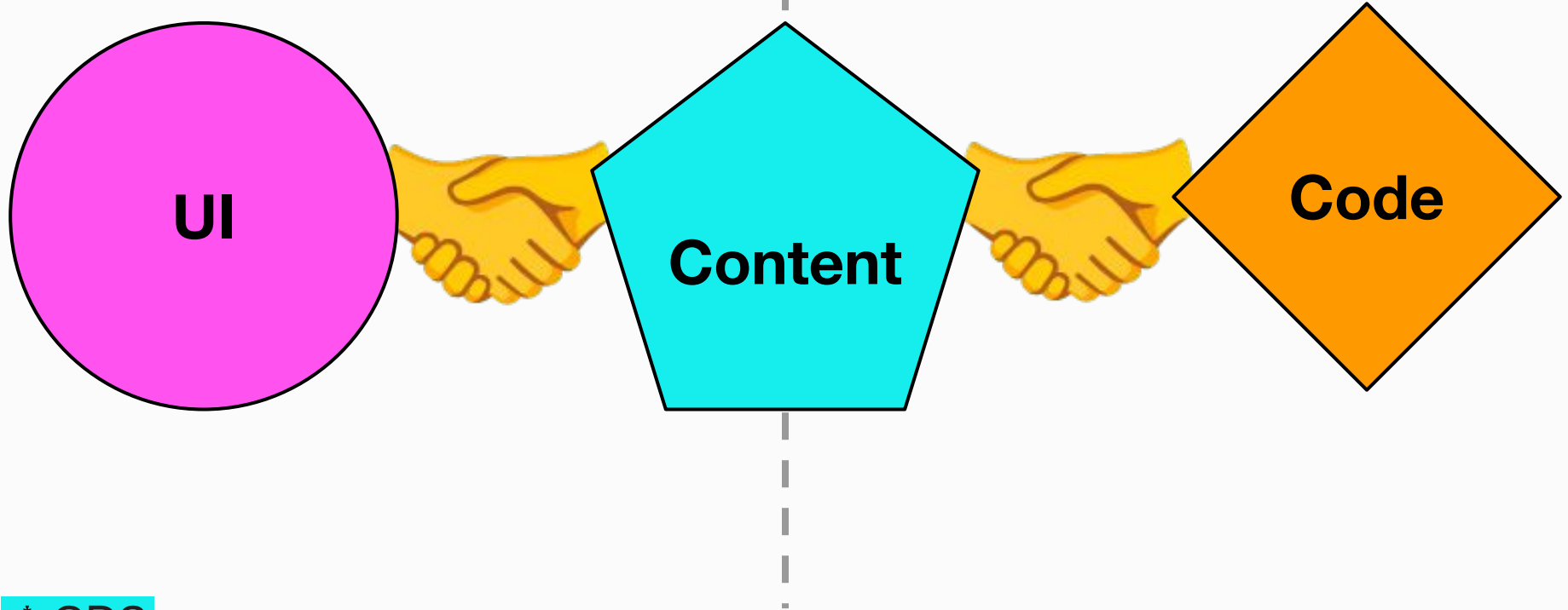


Back-end design



Full-stack design

Front-end(s) | Back-end(s)



JUNE 17, 2025

Welcoming Payload to the Figma team



Kris Rasmussen Chief Technology Officer, Figma

INSIDE FIGMA

NEWS

We're thrilled to announce that the team behind Payload, a leading open-source headless content management system (CMS) and application framework, has joined Figma.



At Config 2025, we talked about supporting the entire spectrum of software development, from designers and developers to other collaborators who take part in the product building lifecycle. We launched new products to make it easier for anyone to go from an idea to

Source: Figma, June 2025

Content Design Spectrum

Back-end(s) ← → Front-end(s)

What's available?

Content Model



Semantic
structure



What's needed?

Content Type

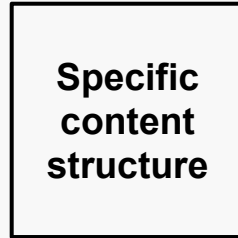


Logical
structure



Where it goes?

Content Format

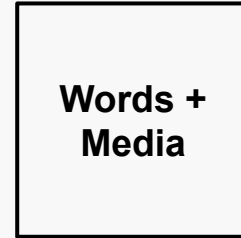


Organisational
structure



What's said?

Content Design

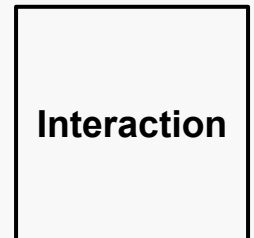


Rhetorical
structure

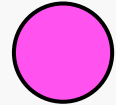


How packaged?

UI Design



Behavioural
structure



[Home](#) > [VAT](#)

VAT rates

The standard VAT rate is
20%

This guide is also available [in Welsh \(Cymraeg\)](#).

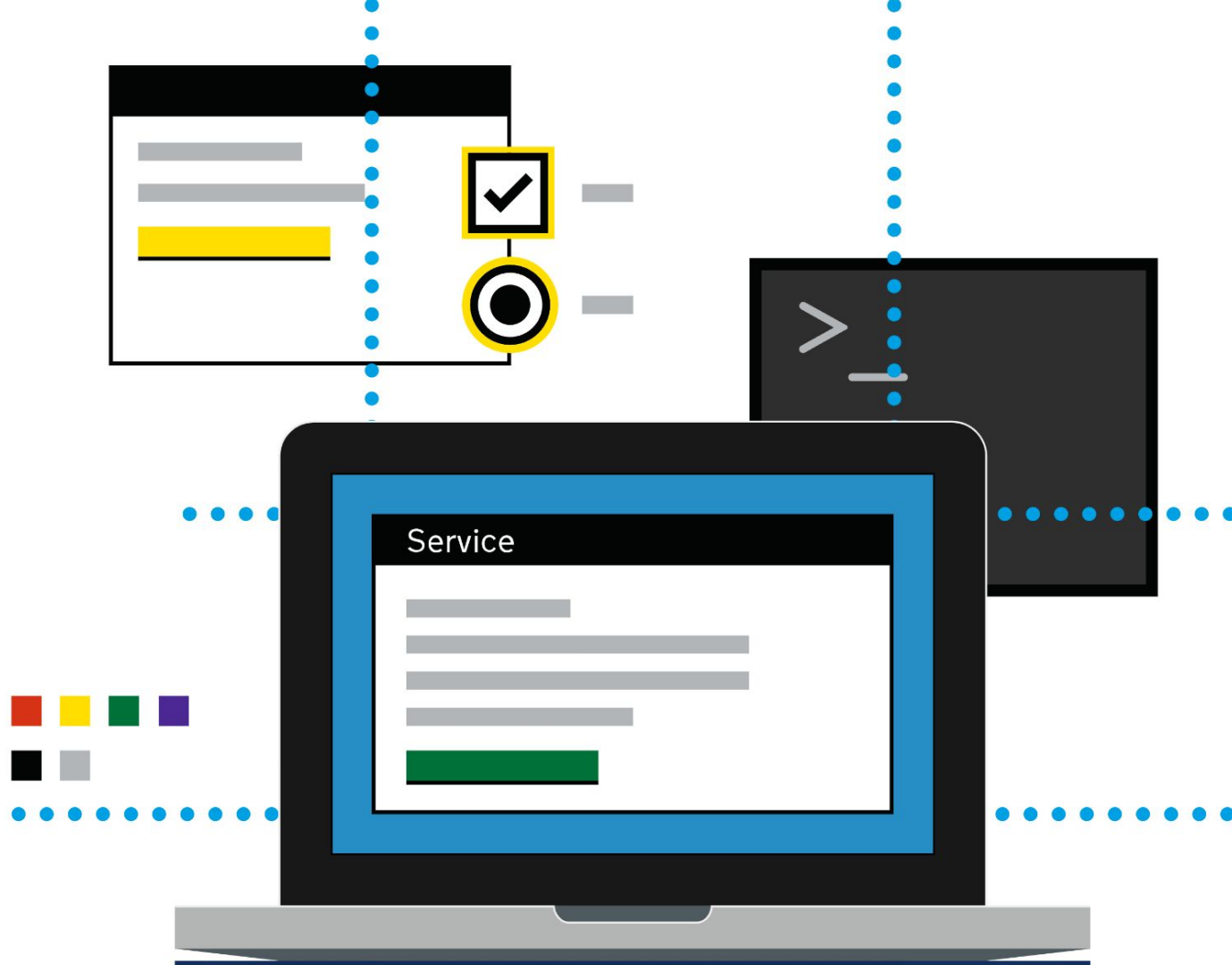
VAT rates for goods and services

	% of VAT	What the rate applies to
Standard rate	20%	Most goods and services
Reduced rate	5%	Some goods and services, for example, children's car seats and home energy
Zero rate	0%	Zero-rated goods and services, for example, most food and children's clothes

The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%).

Some things are exempt from VAT, such as postage





The screenshot shows the GOV.UK website for VAT rates. Annotations with pink circles and lines point to various elements: the GOV.UK logo and navigation menu (Header), the breadcrumb 'Home > VAT' (Breadcrumb), the main heading 'VAT rates' (Heading 1), a dark grey box containing 'The standard VAT rate is 20%' (Panel), a link to the Welsh version (Text), a section heading 'VAT rates for goods and services' (Section-Header), a table with VAT rates (Table), a paragraph about the standard rate increase (Paragraph), and the GDS logo (Page-Footer).

GOV.UK

Home > VAT

VAT rates

The standard VAT rate is 20%

This guide is also available [in Welsh \(Cymraeg\)](#).

VAT rates for goods and services

	% of VAT	What the rate applies to
Standard rate	20%	Most goods and services
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Zero rate	0%	Zero-rated goods and services, for example, most food and children's clothes

The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%).

Some things are exempt from VAT, such as postage

GDS

Component: **Header**

Component: **Breadcrumb**

Style: **Heading 1**

Style: **Colour**

Component: **Panel**

Style: **Typeface**

Component: **Table**

Style: **Paragraph**



✍️ style: inverted pyramid

Home > VAT

VAT rates

The standard VAT rate is
20%

This guide is also available [in Welsh \(Cymraeg\)](#).

✍️ style: front-load

VAT rates for goods and services

✍️ style: range evaluation

	% of VAT	What the rate applies to
Standard rate	20%	Most goods and services
Reduced rate	5%	Some goods and services, for example, children's car seats and home energy
Zero rate	0%	Zero-rated goods and services, for example, most food and children's clothes

✍️ style: plain English

The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%)

Some things are exempt from VAT, such as postage



Object: **Answer**

Object: **Tax**

Object: **Tax rate**



Menu

Home > VAT

VAT rates

The standard VAT rate is 20%

This guide is also available [in Welsh \(Cymraeg\)](#).

VAT rates for goods and services

	% of VAT	What the rate applies to
Standard rate	20%	Most goods and services
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Zero rate	0%	Zero-rated goods and services, for example, most food and children's clothes

The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%).

Some things are exempt from VAT, such as postage

Home > VAT

Tax: **Acronym**

VAT rates

The standard VAT rate is
20%

This guide is also available [in Welsh \(Cymraeg\)](#).

VAT rates for goods and services

	% of VAT	What the rate applies to
Standard rate	20%	Most goods and services
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The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%).

Some things are exempt from VAT, such as postage

Tax rate: **Name**

Tax rate: **Amount**

Tax rate: **Description**

Tax: **Date**

Answer

Title

Body

Answer

Guide

Person

Speech

Org

News

Role

Statistic

Manual

Policy

...

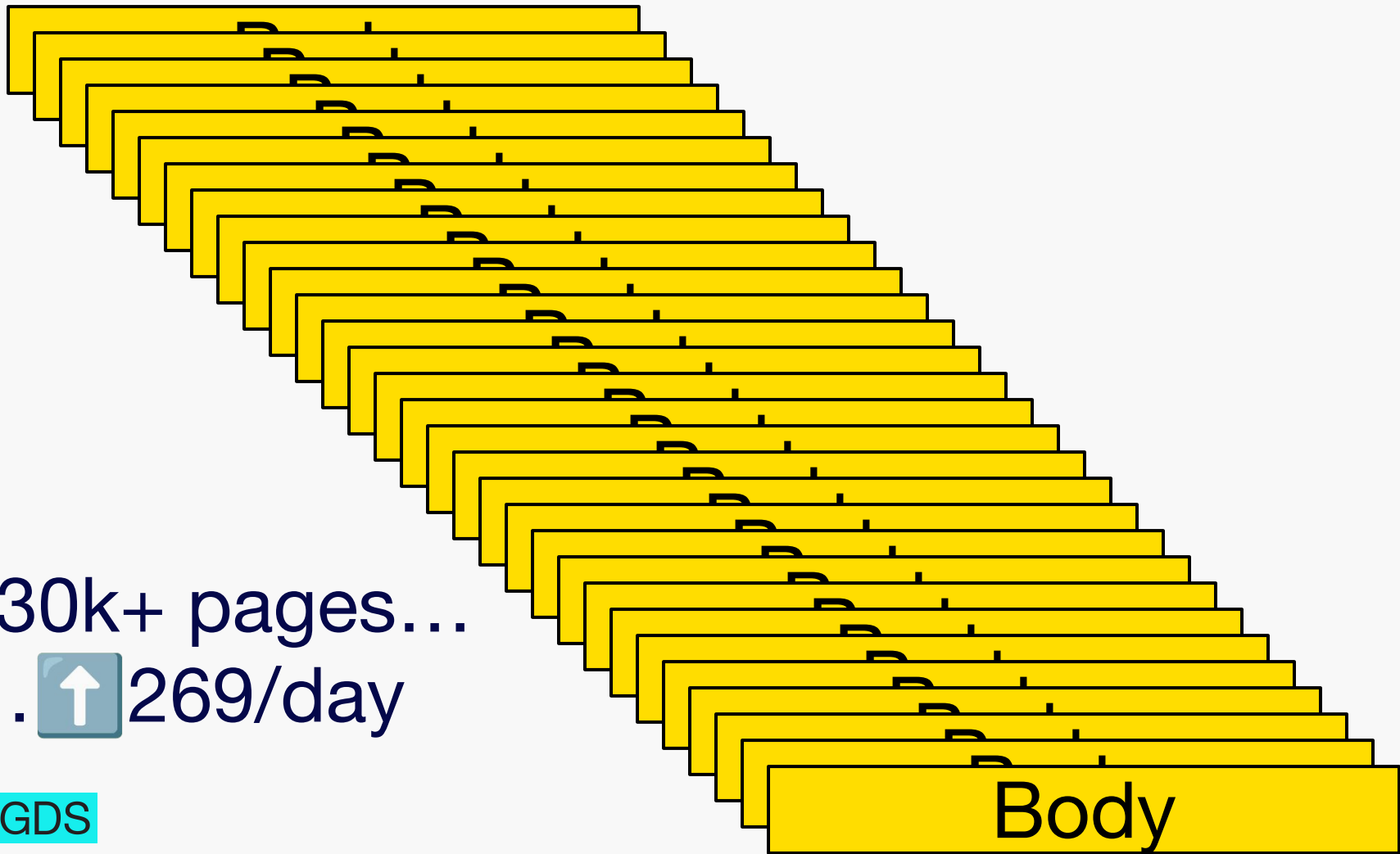


Content Type

Title

Body

Topic

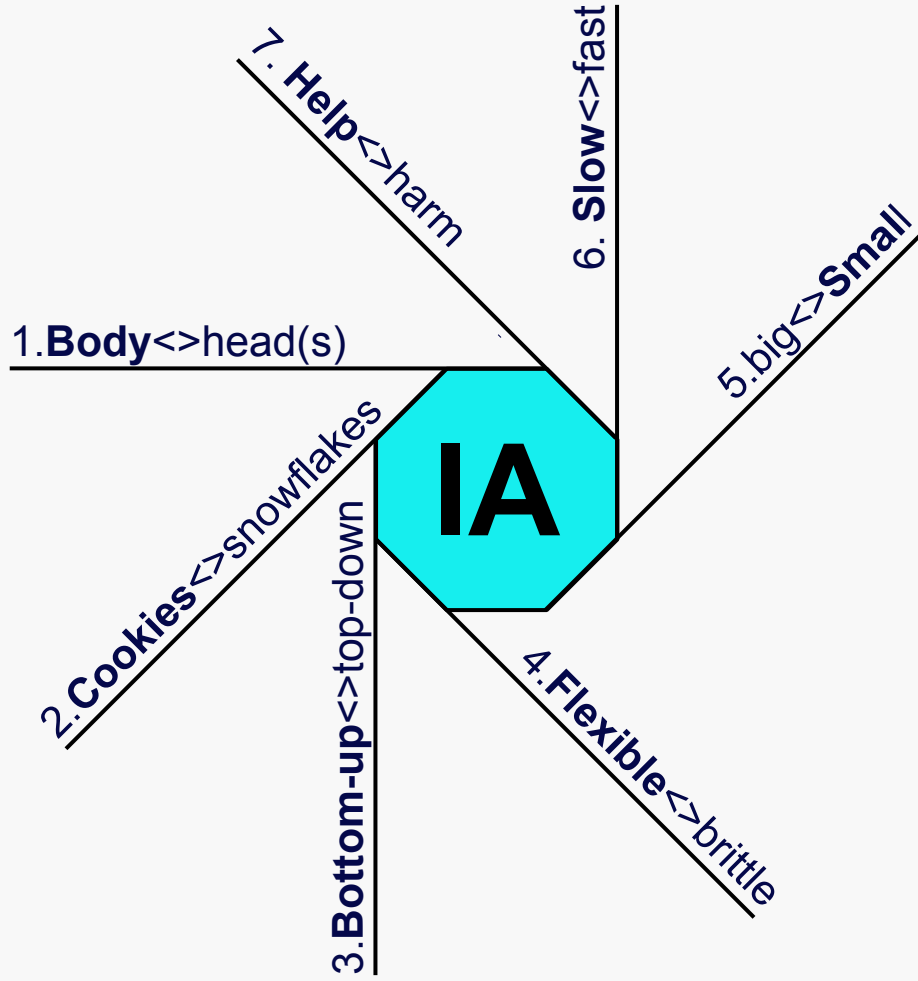


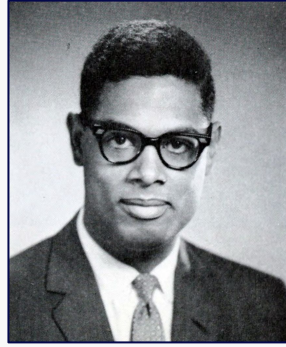
830k+ pages...

...  269/day

We need full-stack design systems to deliver multichannel service at scale.

7 design lenses





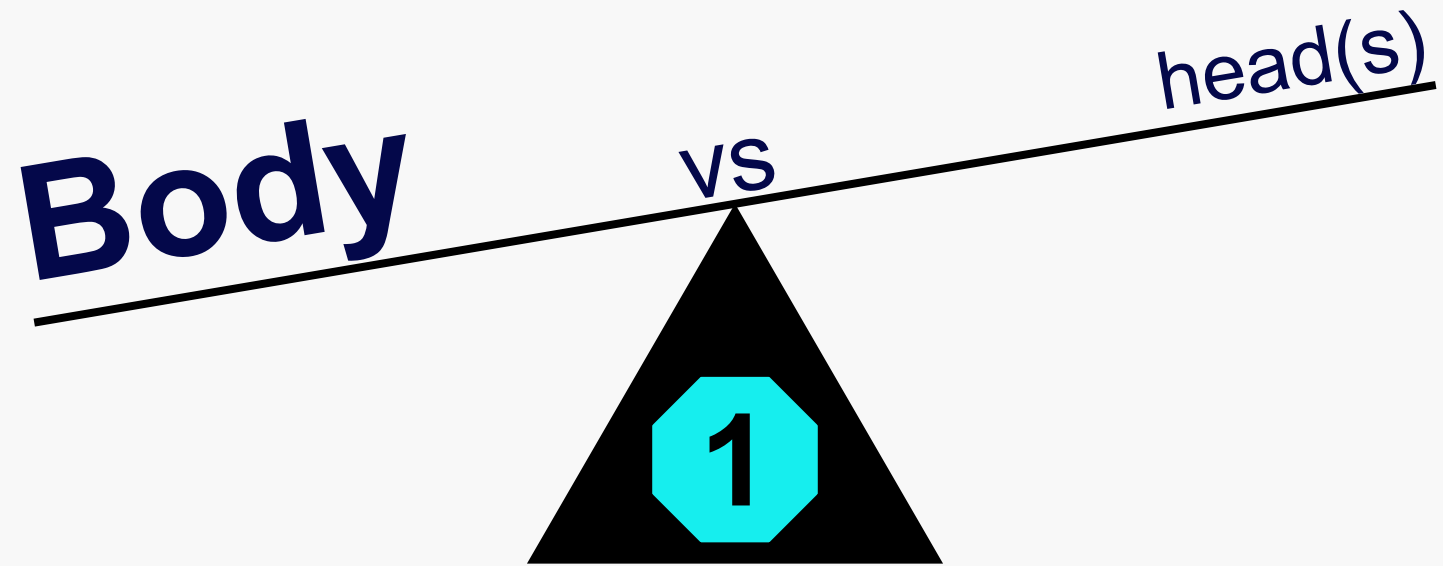
**“There are no solutions —
there are only tradeoffs.”**

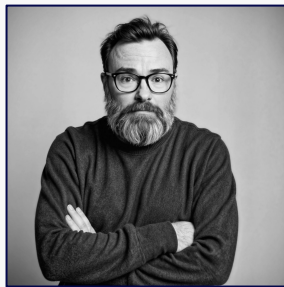
Thomas Sowell

Lens 1

Body vs Head(s)

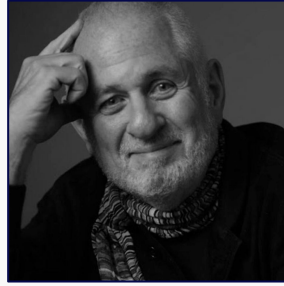
Decouple what users need from its packaging and representation.





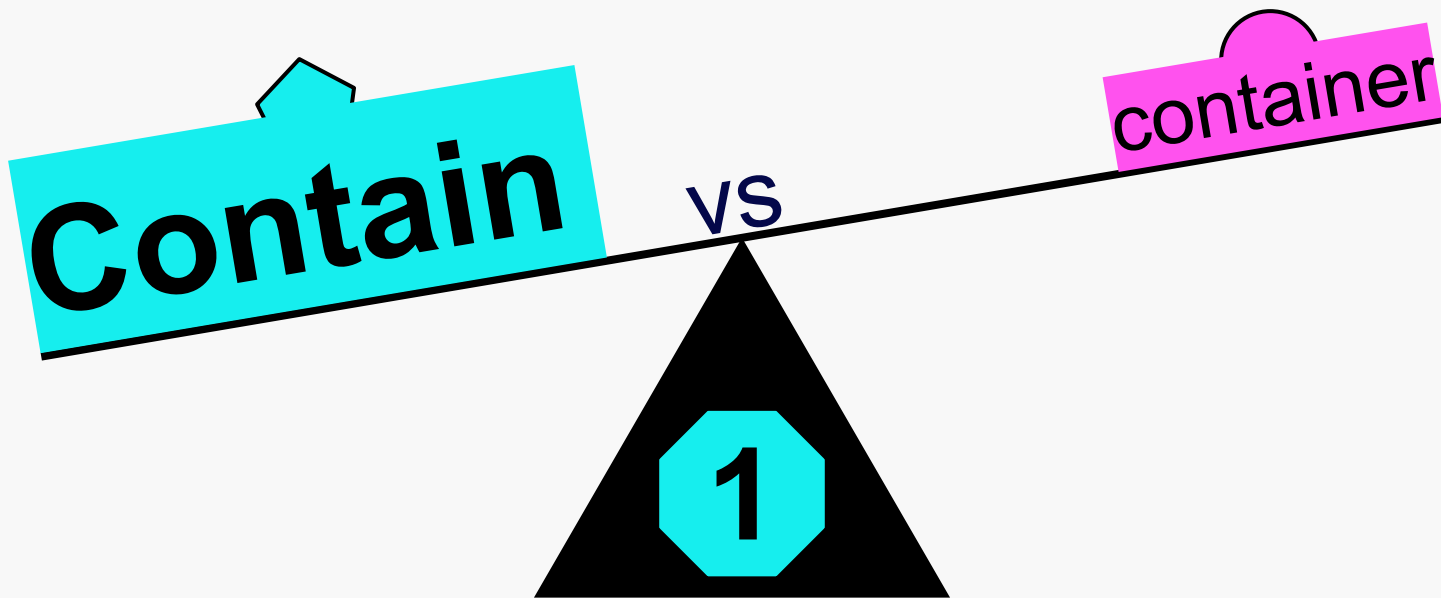
“People don't care about the **containers**. They care about the things they **contain**.”

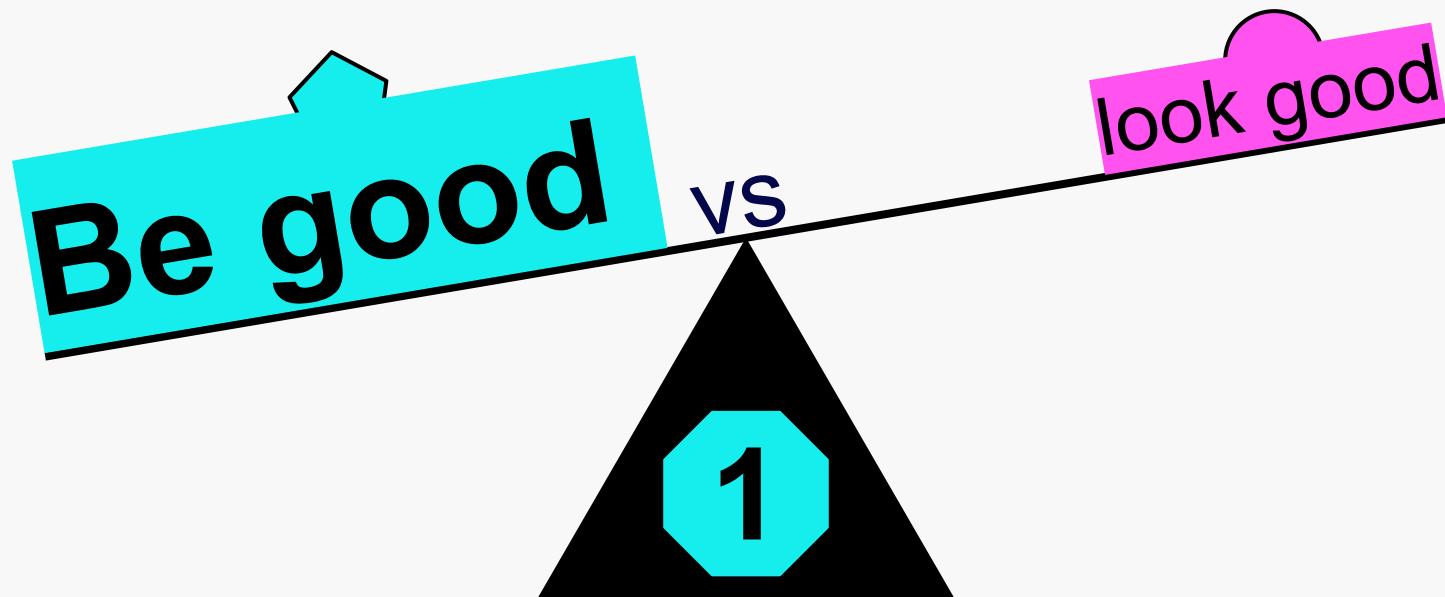
Mike Atherton



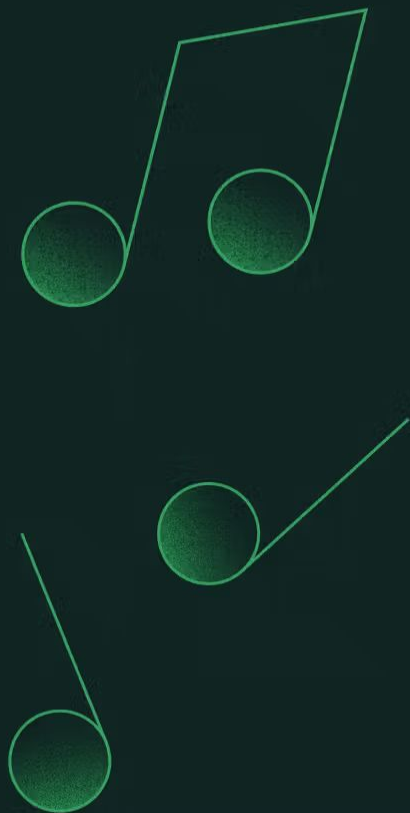
“The aim is not to make something look good, but to **make it be good.**”

Richard Saul Wurman

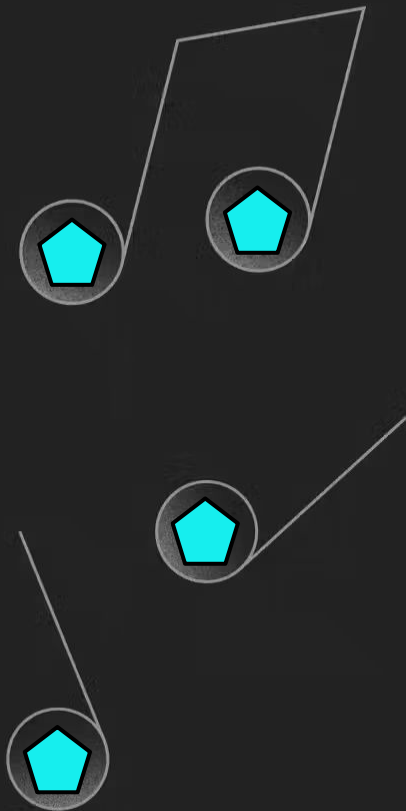




UI and code systems are a means to an end — content is what humans come for (and machines need).



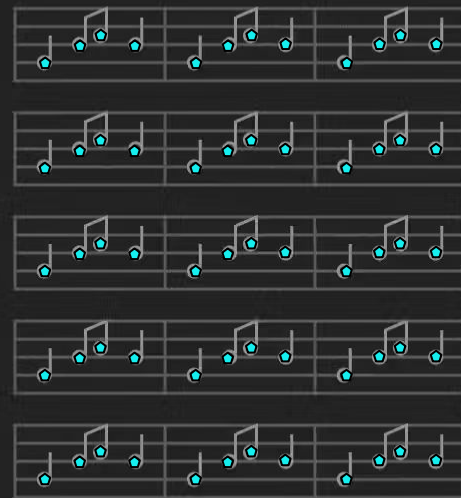
Attributes



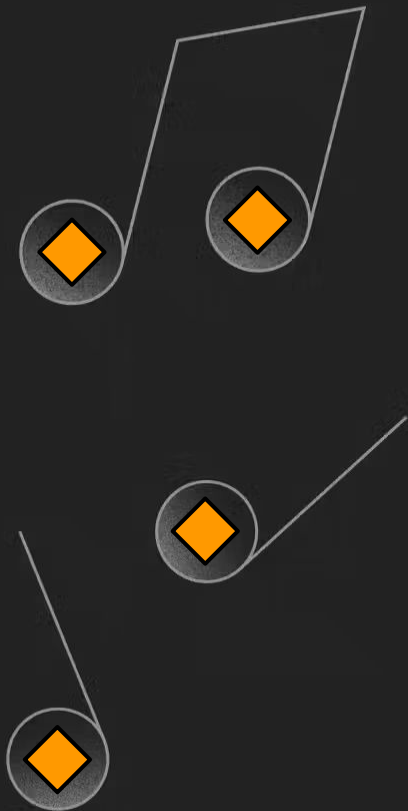
Objects



Product



Styles



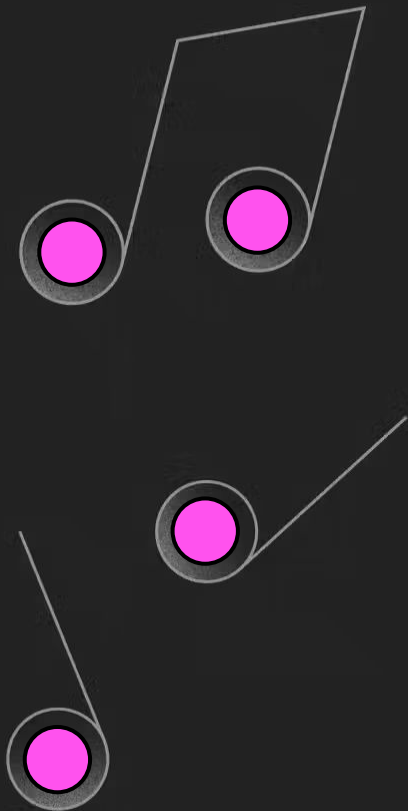
Components



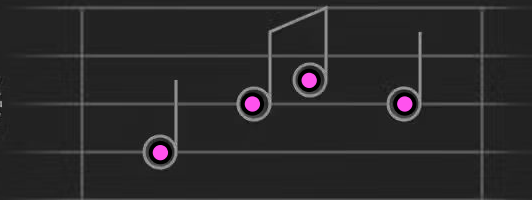
Product



Styles



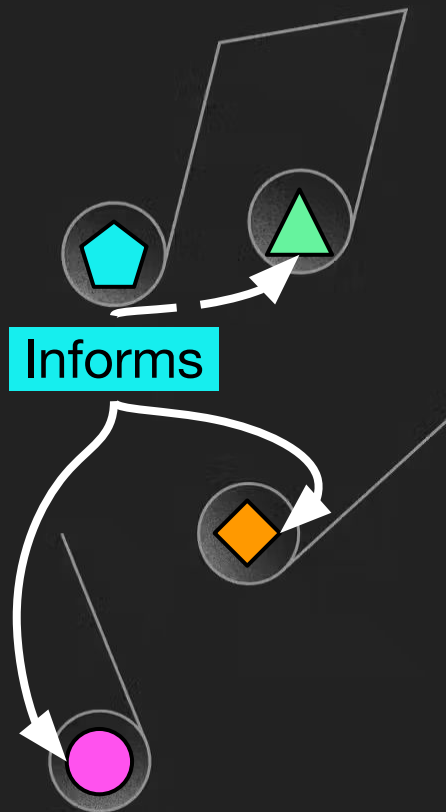
Components



Product



Design System

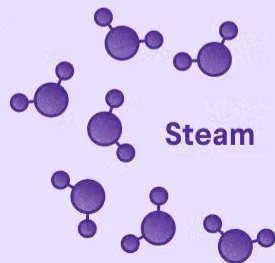
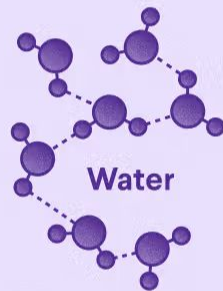
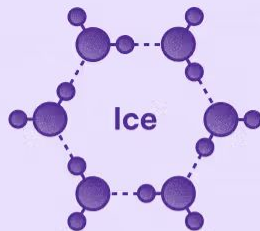
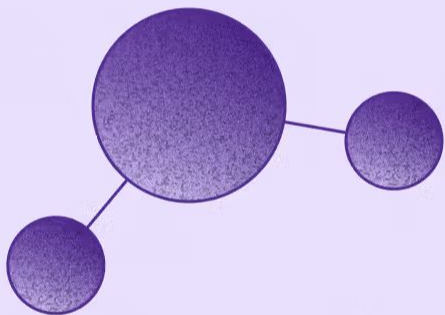


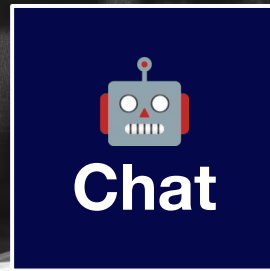
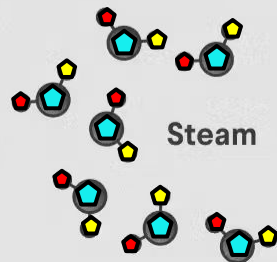
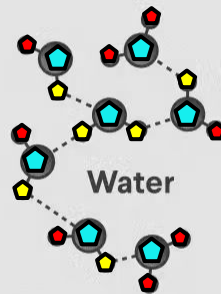
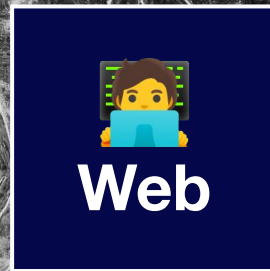
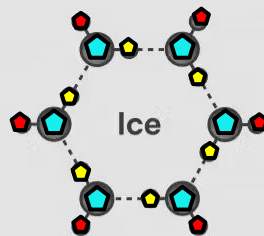
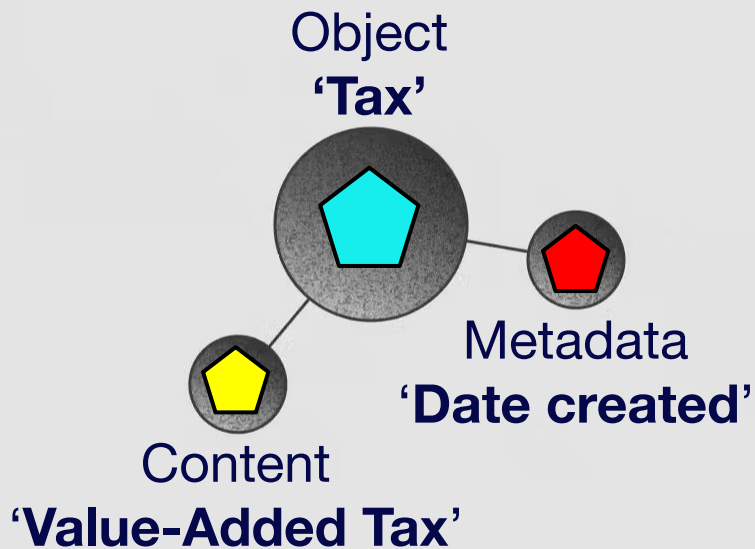
Composition via UCD



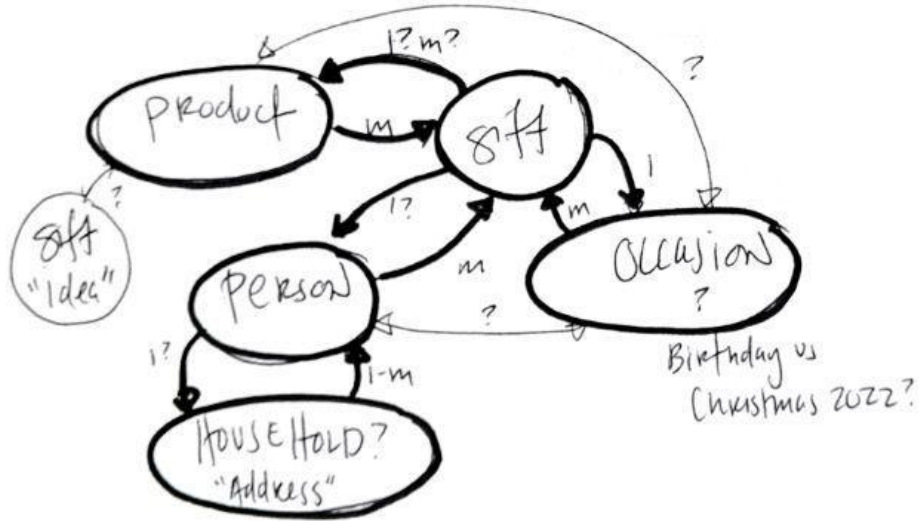
Product(s)



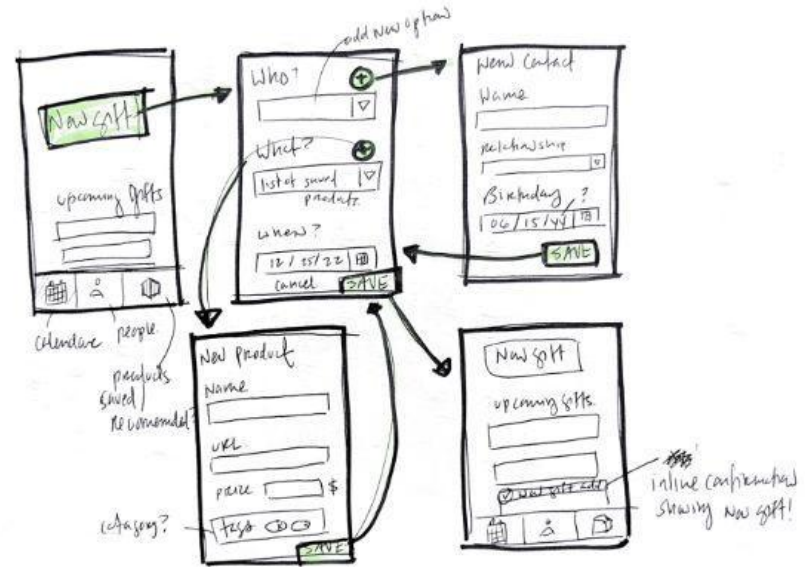




“Be good”



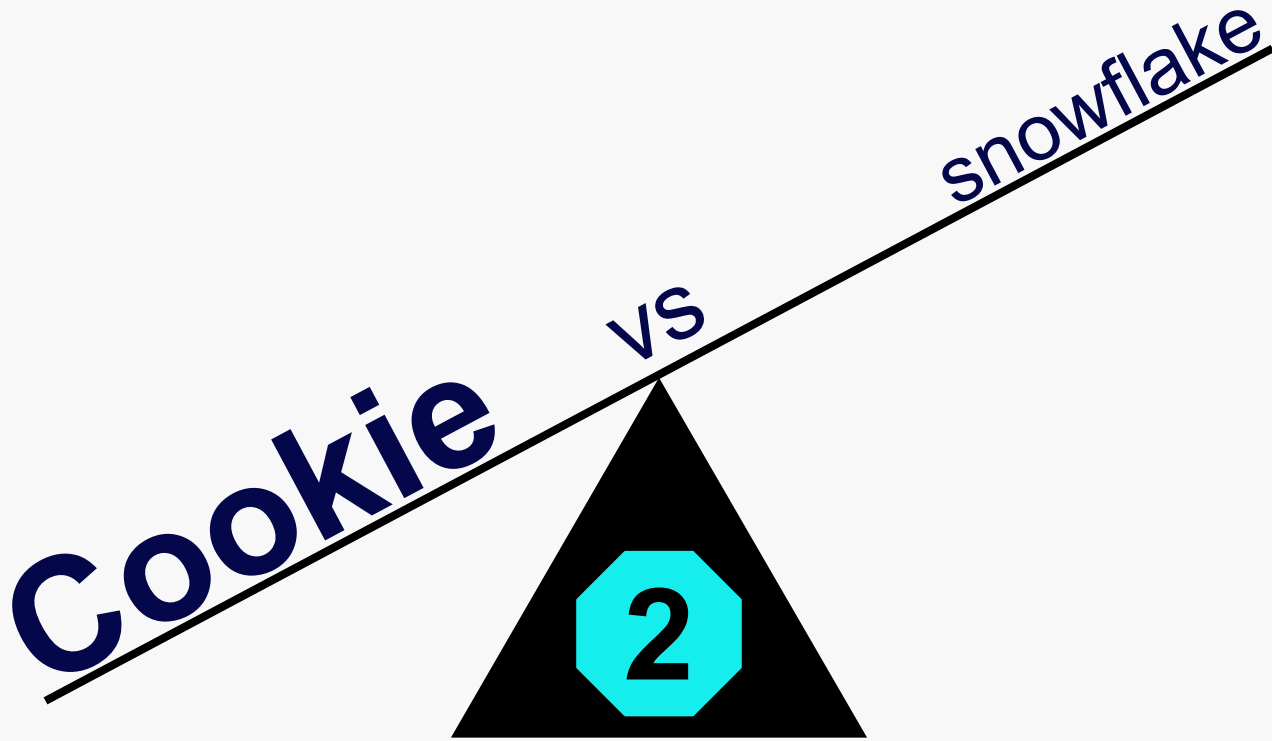
“Look good”



Lens 2

Cookies vs Snowflakes

Look for content with repeating structure over one-of-a-kind content.



Tangible

Agnostic

Durable

Object

Structure

Instances

Purpose

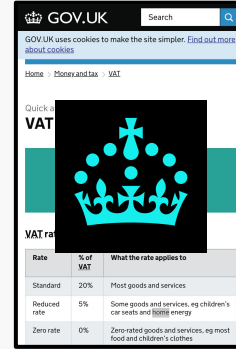
Tangible

Agnostic

Durable

£
Tax

£ Tax



5000BC

1900BC

100

1066

1214

1765

2013

Tangible

Agnostic

Durable

£

Tax

Structure

Instances

Purpose

Structure



has **Content?**

Title

Acronym

has **nested objects?**

Rate

Publisher

has **Metadata?**

ID

Topic

Instances



Object

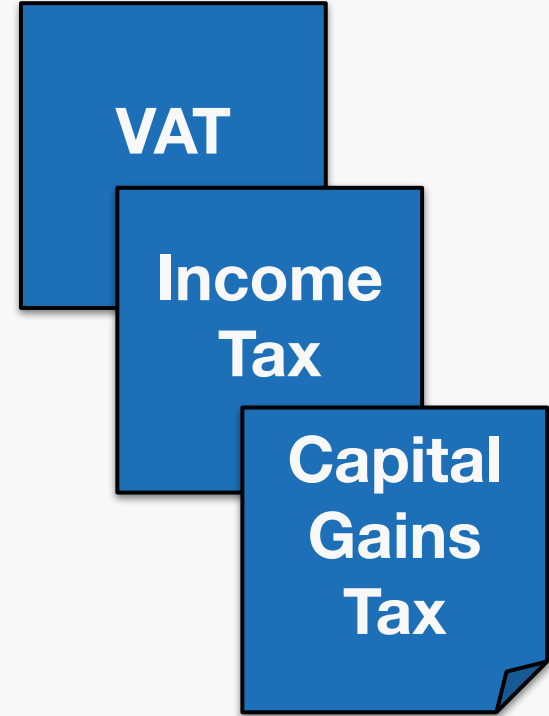


Instances

Object



Instances



Purpose

“As a 🧑 **User** I need to know the **rate** of **VAT** for the **Goods** I’m buying so that I **pay** the right **Tax**.”

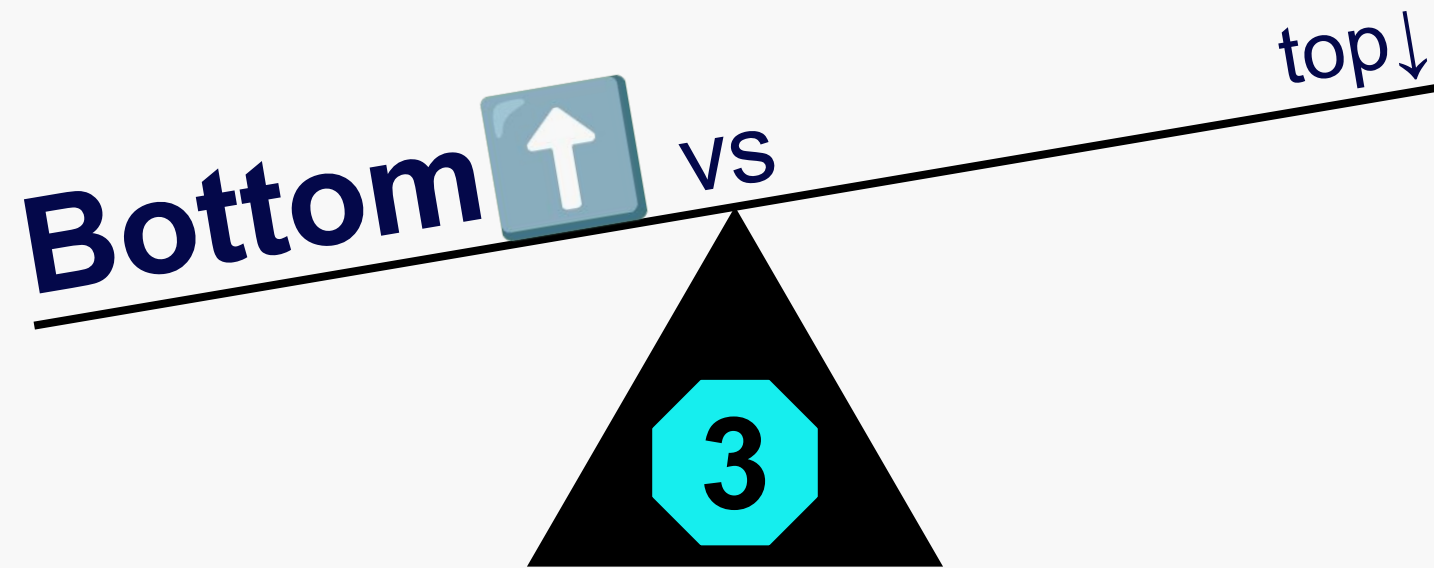
“As a 🧑 **User** I need to know if a **Country** is **safe** to travel to so that I don’t void my insurance.”

“As a 🧑 **User** I need to **Find** the **Office** so that I can attend my **Appointment**.”

Lens 3

Bottom up vs top down

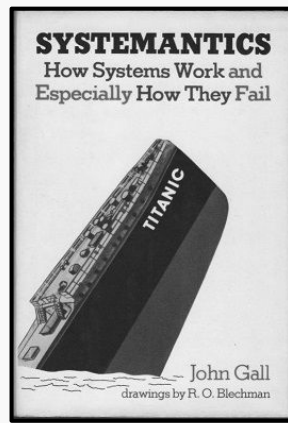
Design ‘many small things’ rather than ‘one big thing’.





“Rather than treat content models as monolithic plans, it is more helpful to think of them as behaving like LEGO. They should support the configuration of content in multiple ways.”

Michael Andrews



“If you want to build a complex system that works, build a simpler system first, and then improve it over time.”

John Gall



Title



Type



Get email alerts



Tax



Description



Frequency



Start



Pension



Amount



Country



Report a problem



Visa



Email address



Risk level



Submit



Rate



Acronym



ID



Search



Statistic



Given name



Date



Sign in



Contact



Family name



Time



Feedback



Benefit

...

...

...

...



GDS



Tax (has 1-many Rate)



ID (e2c44bf...)



Title (Value-Added Tax)



Acronym (VAT)



Description (VAT (Value Added Tax) is a tax added to most...)



Rate (has 1 Tax)



Title (Standard Rate)



Amount (20%)



Description (Most goods and services)



Tax (has 1-many Rate)



ID (0169ice...)



Title (Capital Gains Tax)



Acronym (CGT)



Description (Capital Gains Tax is a tax on the profit...)



Rate (has 1 Tax)



Title (Residential Rate)



Amount (36%)



Description (Gains from residential property)



Pension (has 1-many Rate)



ID (a98d-fb...)



Title (Basic State Pension)



Description (This applies if you reached State Pension age before...)



Rate (has 1 Pension)



Title (Full amount)



Amount (£176.45)



Frequency (Week)



Address



ID (bf10937...)



Type (Embassy)



Recipient (Consular Section)



Building number (70/71)



Street (Wilhelmstraße)



Town or city (Berlin)

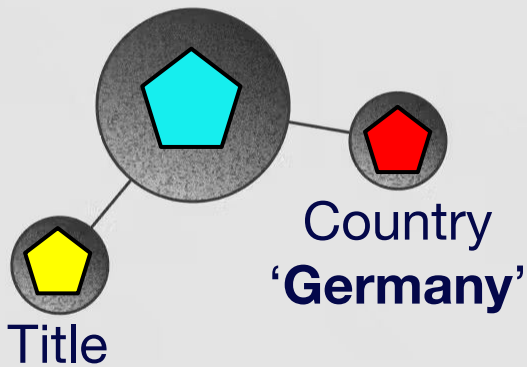


Postal code (10117)

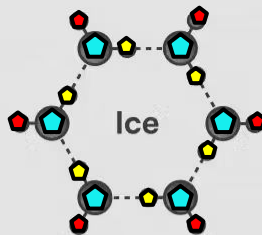


Country (Germany)

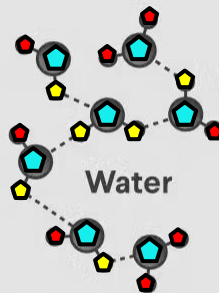
Object
Address



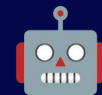
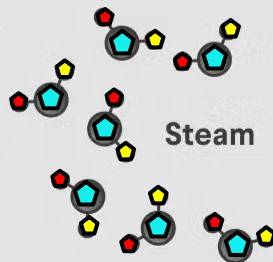
'British Embassy Berlin'



Web



App

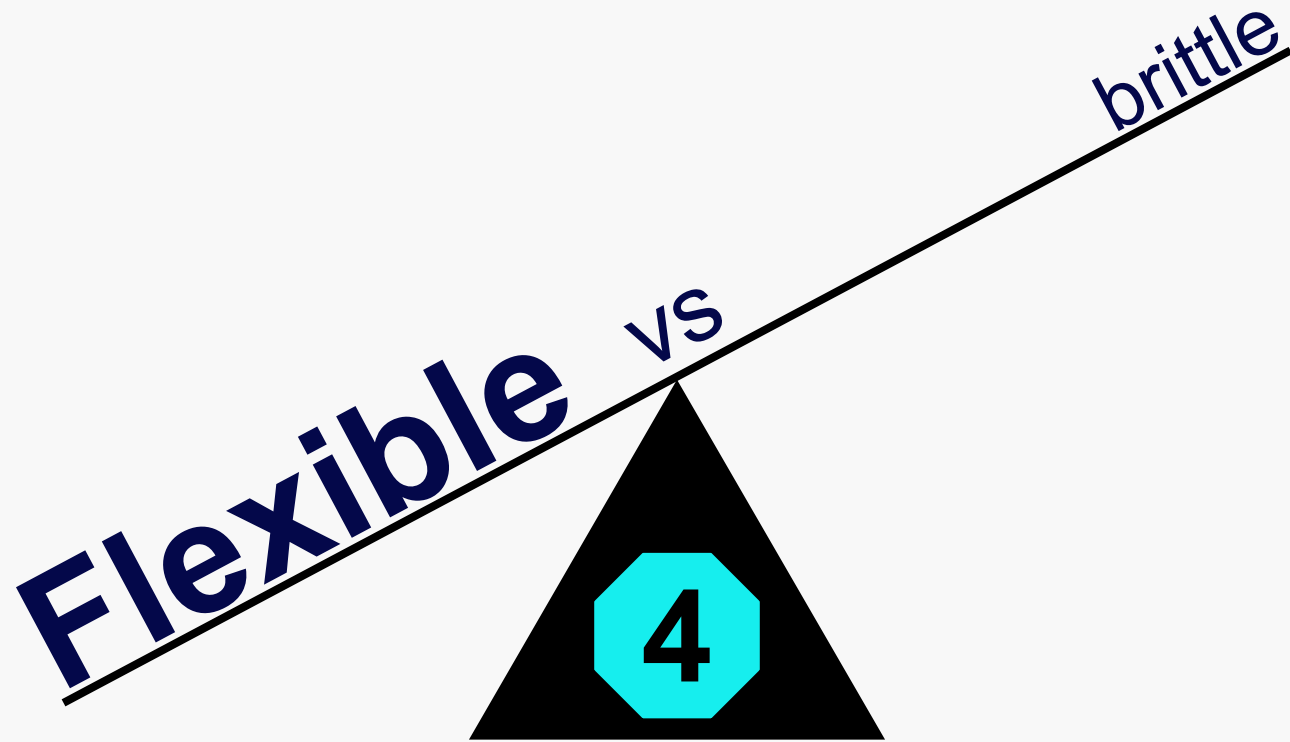


Chat

Lens 4

Flexible vs Brittle

Prefer adaptability to monolithic.





“Don’t build an IKEA product that can’t be disassembled when you need to move.”

Michael Andrews



Title



Type



Get email alerts



Tax



Description



Frequency



Start



Pension



Amount



Country



Report a problem



Visa



Email address



Risk level



Submit



Rate



Acronym



ID



Search



Statistic



Given name



Date



Sign in



Contact



Family name



Time



Feedback



Benefit

...

...

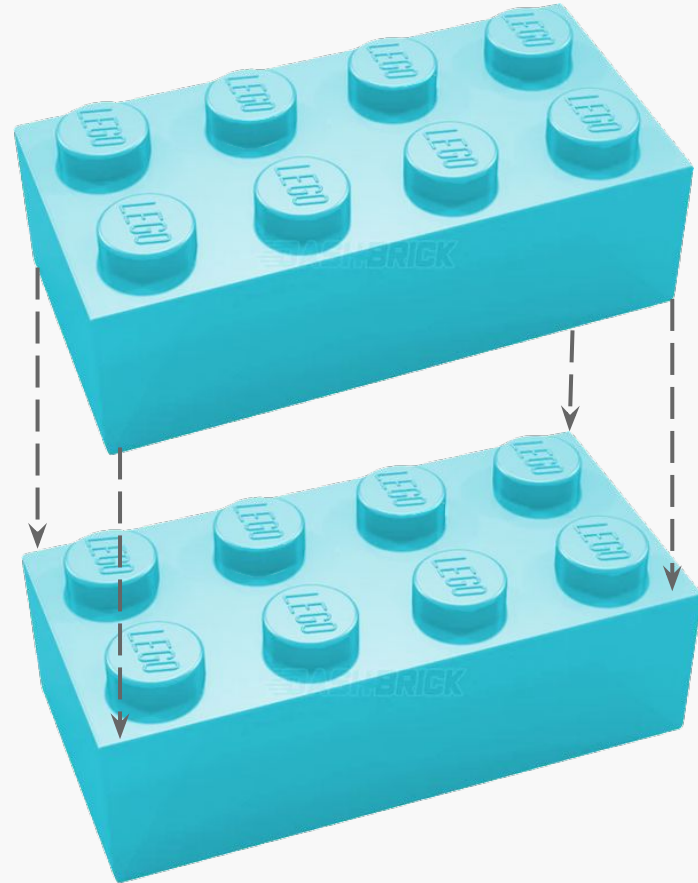
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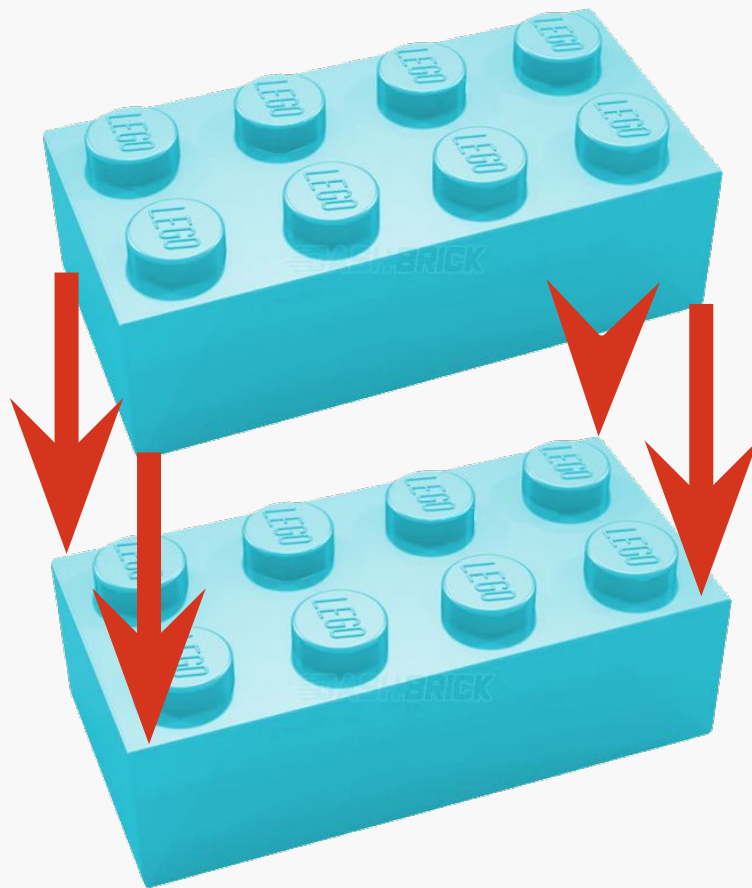
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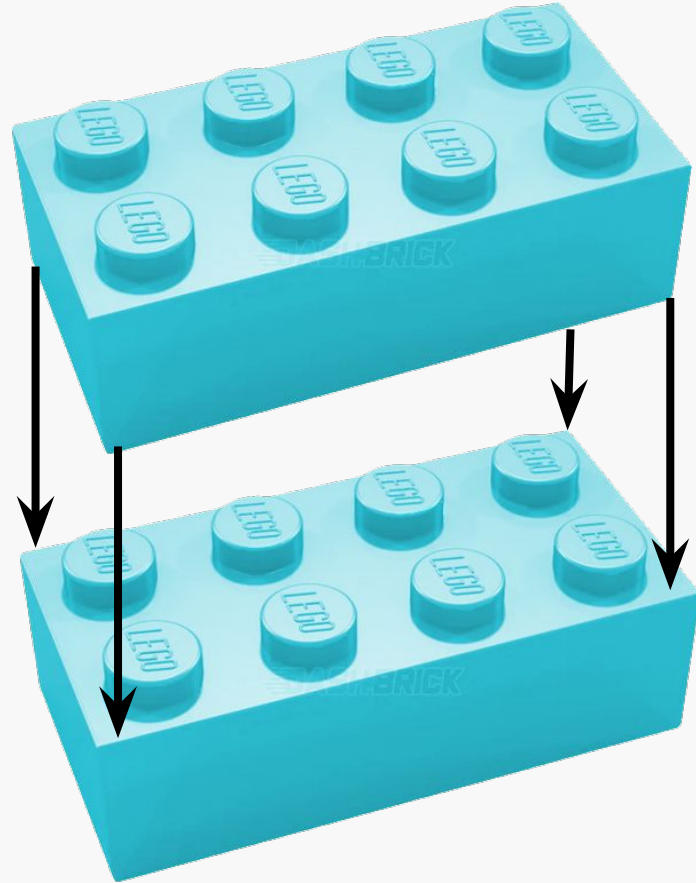


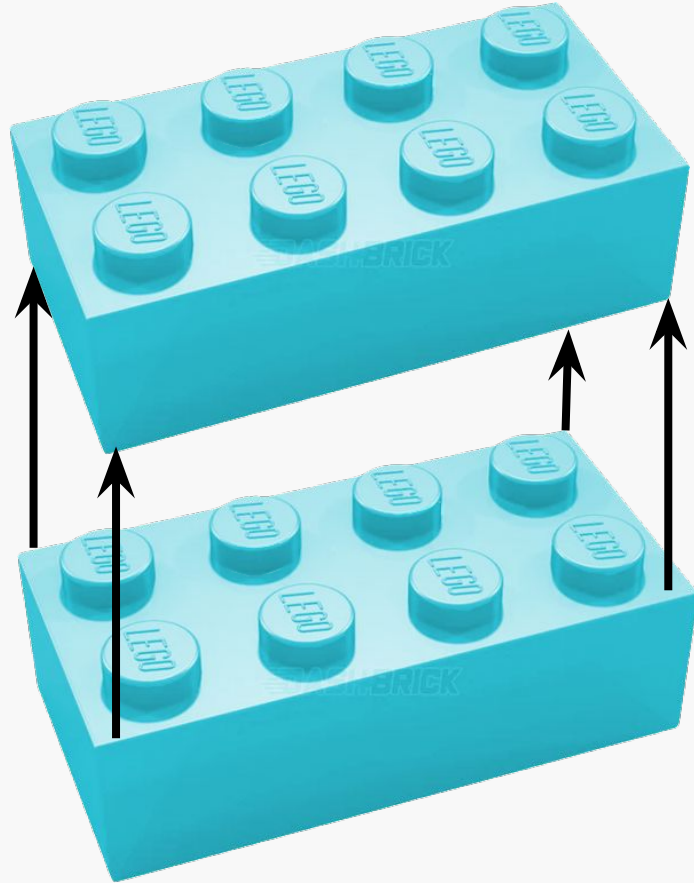
GDS

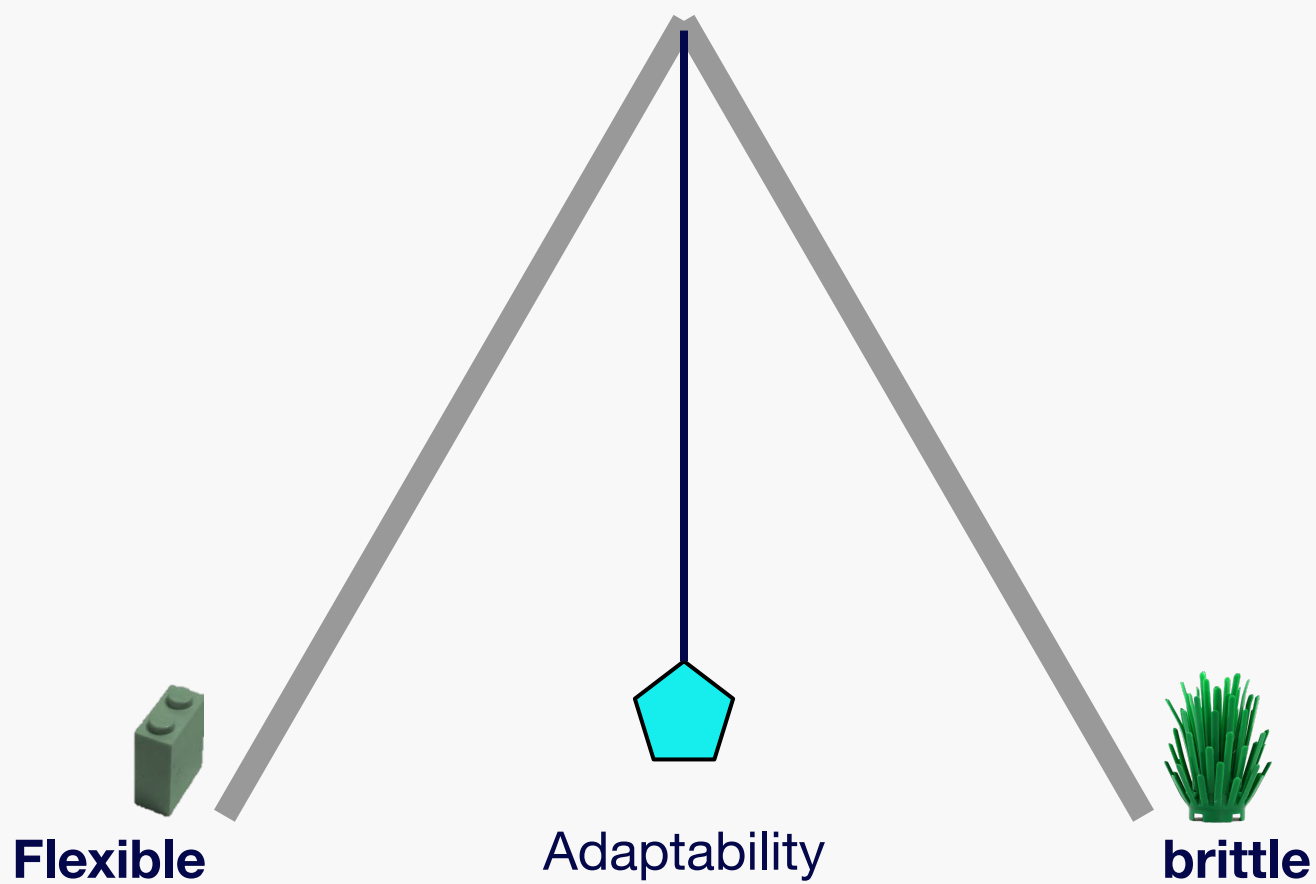








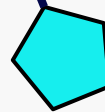


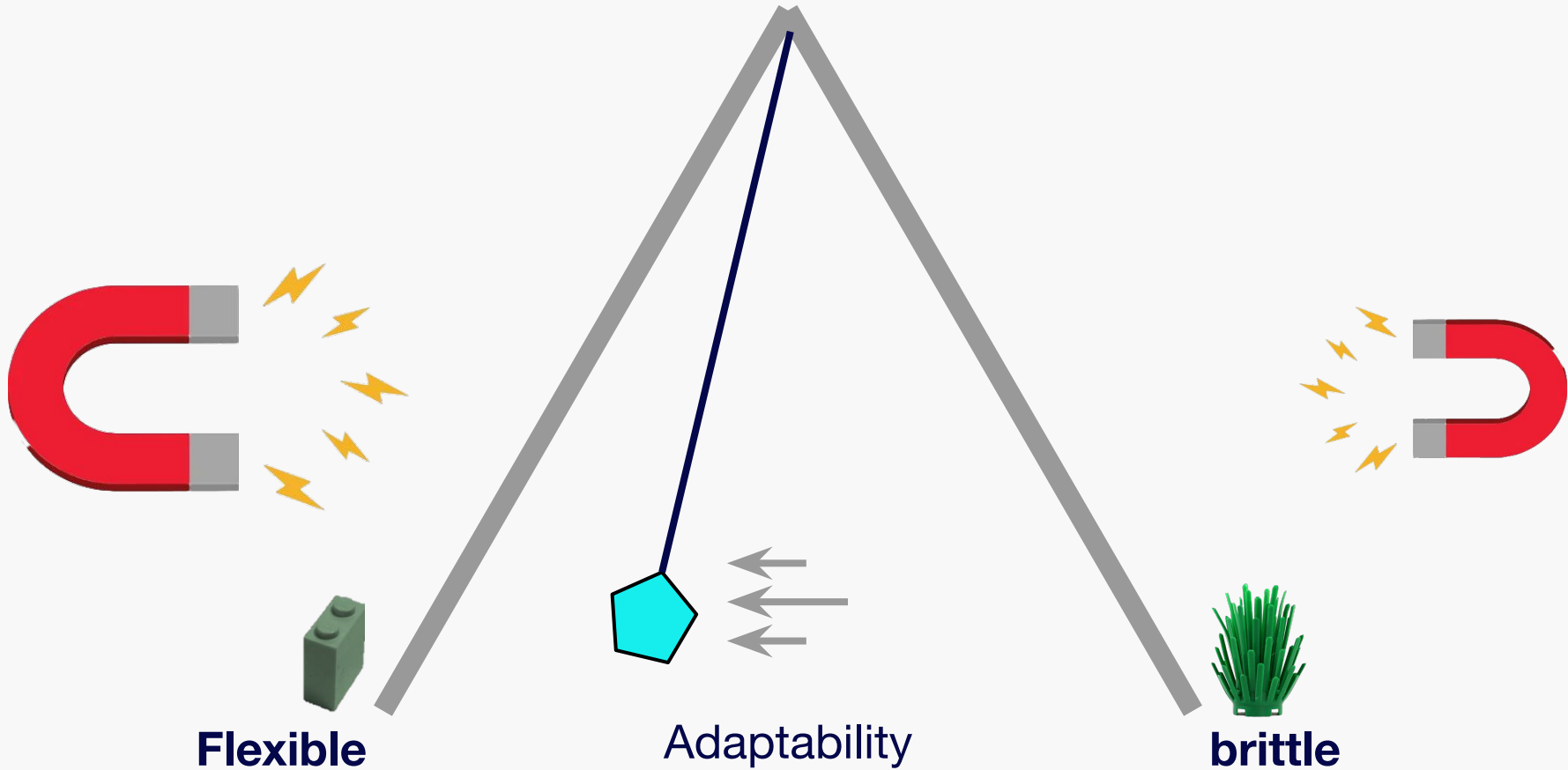


Flexible

Adaptability

brittle







Flexible

tendency to hypertrophy



brittle

Adaptability



Address



ID (bf10937...)



Type (Embassy)



Reorder



Recipient (Consular Section)



Reorder



Building number (70/71)



Reorder



Street (Wilhelmstraße)



Reorder



Town or city (Berlin)



Reorder



Postal code (10117)



Country (Germany)



Address



ID (bf10937...)



Type (Embassy)



Reorder



Recipient (Consular Section)



Reorder



Street (Wilhelmstraße)



Reorder



Building number (70/71)



Reorder



Postal code (10117)



Reorder



Town or city (Berlin)



Country (Germany)



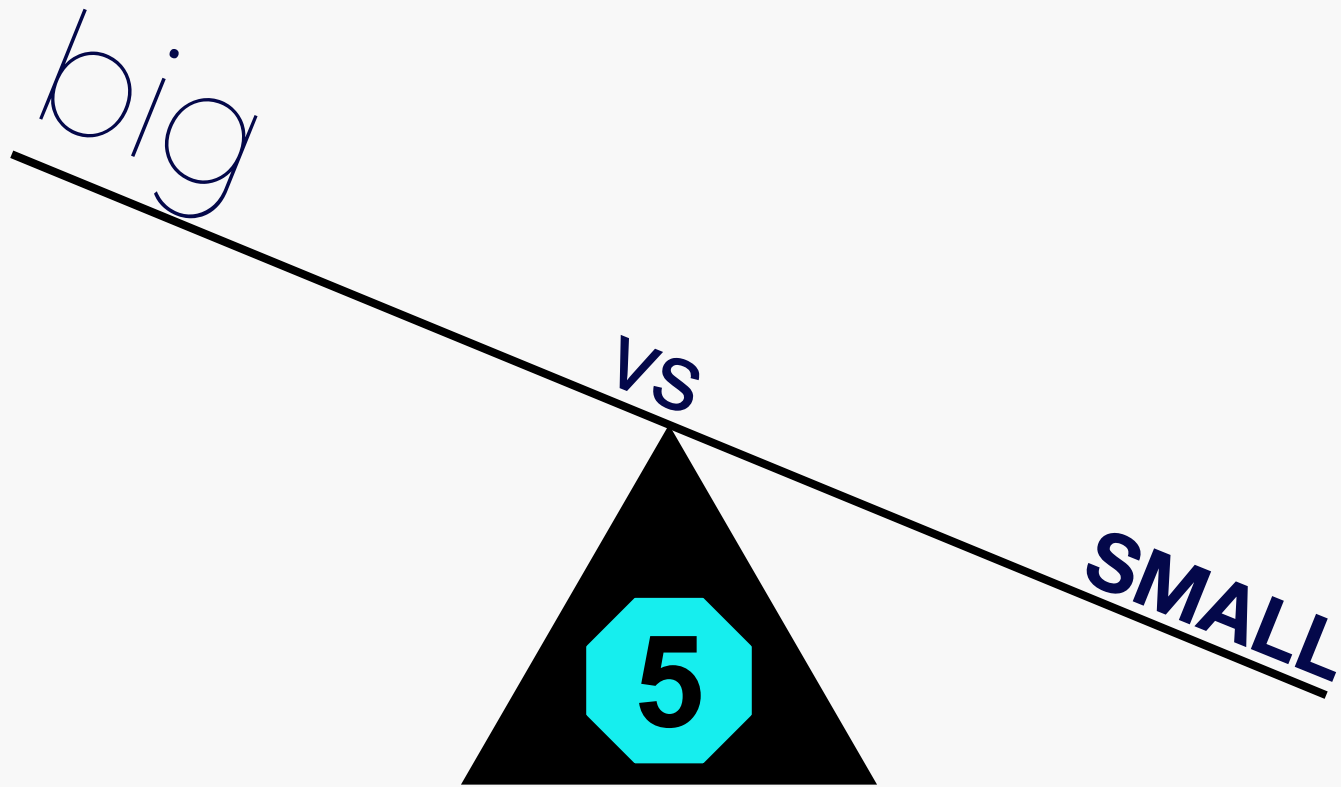
GDS

Modular pieces must be easy to connect and disconnect, cognitively and procedurally.

Lens 5

Big vs Small

Create the smallest reasonable pieces (but no smaller).





“Content that is divided into the **smallest reasonable pieces** and explicitly organised and classified in order to be understood and used by computers and humans.”

Carrie Hane

Smallest **reasonable** — not
smallest *possible* — pieces.



Phone



Body

Contact the helpline on 08003285644



Telephone number

0800 328 5644



Area Code

0800

Telephone number

3285644



Country

Area

Telephone number

0044

800

3285644



Country

Area

Telephone number

Ext.

0044

800

3285644

897



Country

Area

Telephone number

Ext.



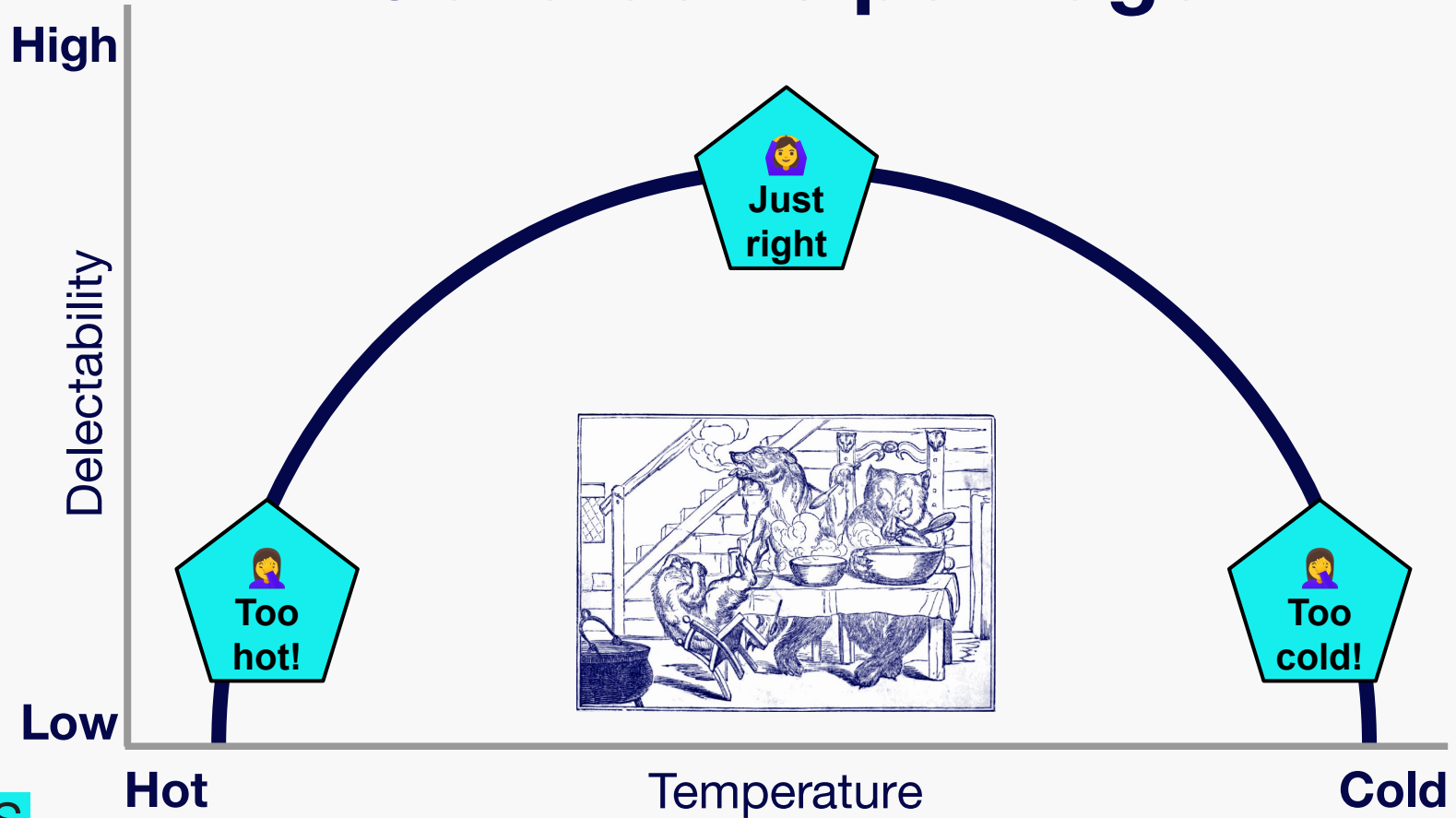
800

3285644

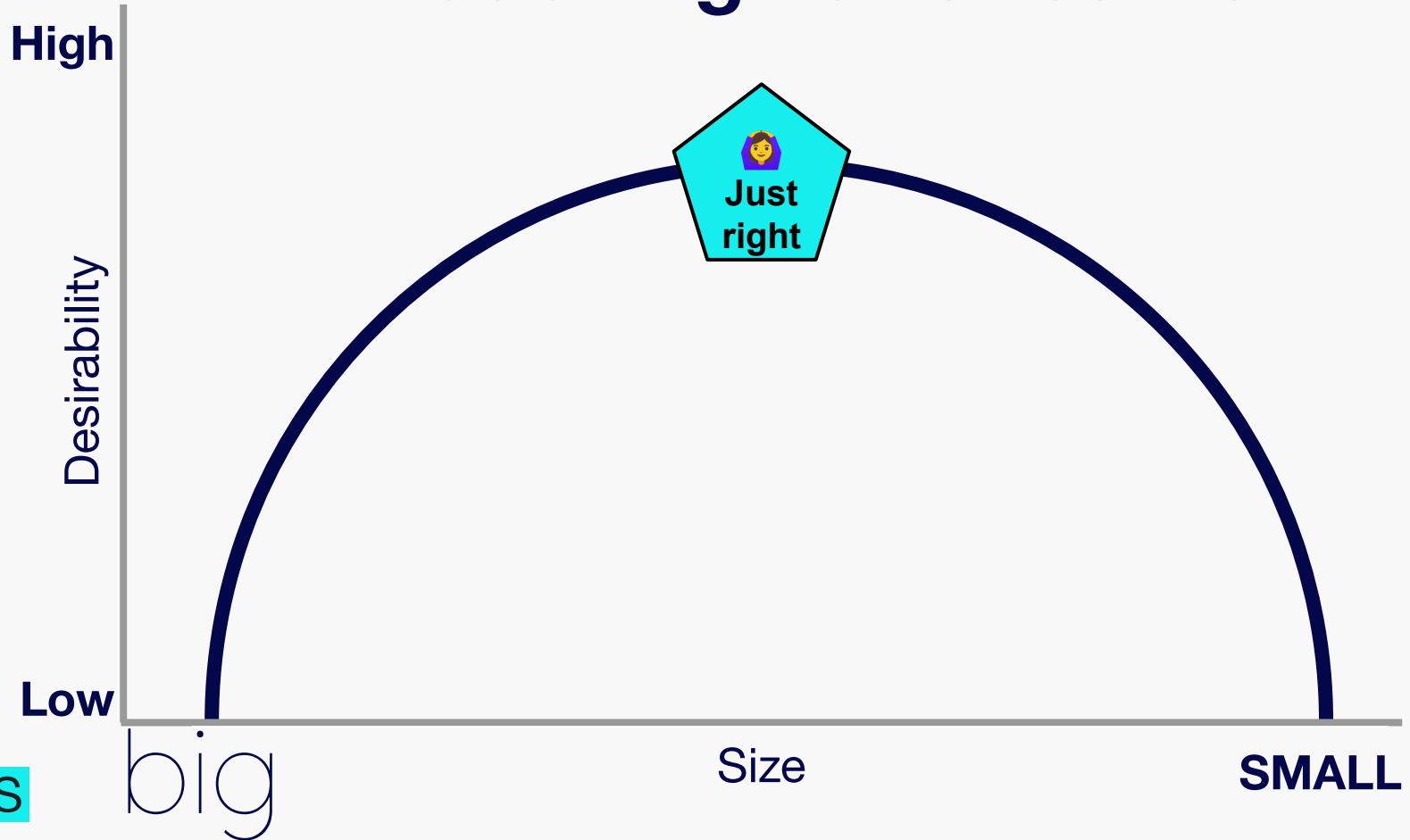
897

0044

Golidlock's porridge



A modelling Laffer curve





Country

Telephone number



0800 32 85644

0044



“Something is elegant if it is two things at once:
unusually simple and surprisingly powerful.”

Matthew E May

Lens 6

Slow vs Fast

Understand where you're adding, or removing, friction.



“Friction is not always good or bad. It can be appropriate, it can be annoying, it can be unnecessary, and can be essential.
Context makes friction good, bad, or ugly.”

Zoltan Kollin

Good

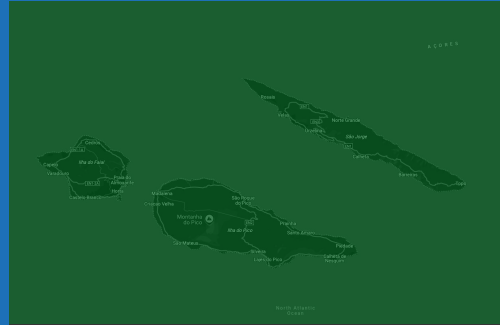
“Do make me think”—prevent errors by making the process of committing errors longer and harder.



Travel Advice

Atlantis

Safe



Review



Web

Atlantis

No travel



Chat

Atlantis

No travel



App

Atlantis

Safe

Publish



Web

Atlantis

No travel



Chat

Atlantis

No travel



App

Atlantis

No travel



Bad

“Don’t make me think” —
milliseconds of re-interpreting
a label, every redundant tap,
that's micro-friction.

↑ **UX grammar.** ↓ **Friction.**



Edit



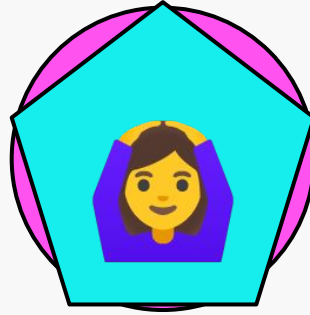
Update



Change



Modify

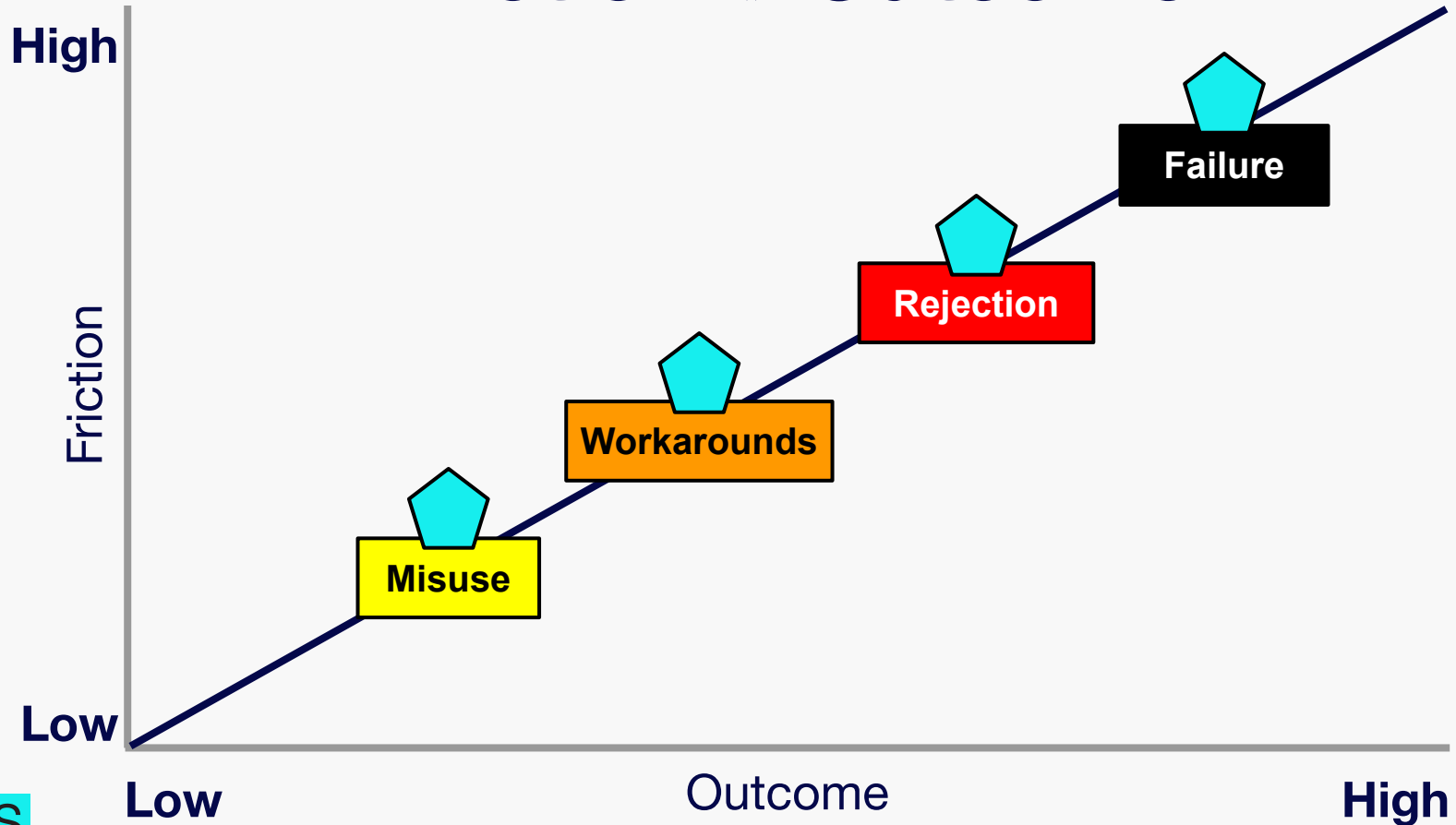


Edit

Ugly

—tangible minor friction
today vs diffuse major friction
tomorrow.

Friction<>Outcome



Lens 7

Help vs Harm

Are there design ethics to consider and balance?

Accessible

Adaptable

Consistent



Cohesive

Efficient



Modular

Multichannel



Robust



Scalable

GOV.UK Web

Body

.....

£Tax

‘value’

.....



GOV.UK Web

Body

£Tax

'20%'

.....



GOV.UK Chat

Chat

£Tax

'20%'



GOV.UK App

Account

£Tax

'20%'



GOV.UK Web

Body

£Tax

'15%'

.....



GOV.UK Chat

Chat

£Tax

'15%'



GOV.UK App

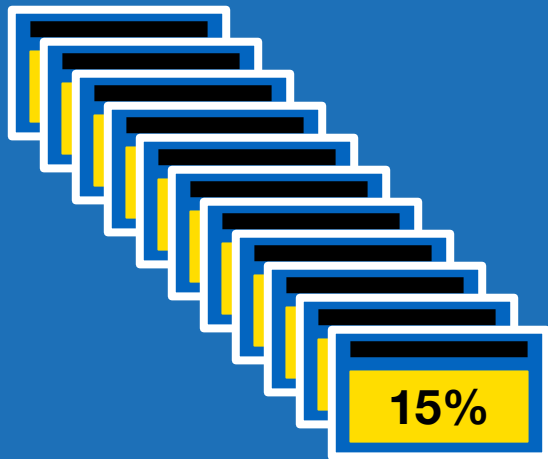
Account

£Tax

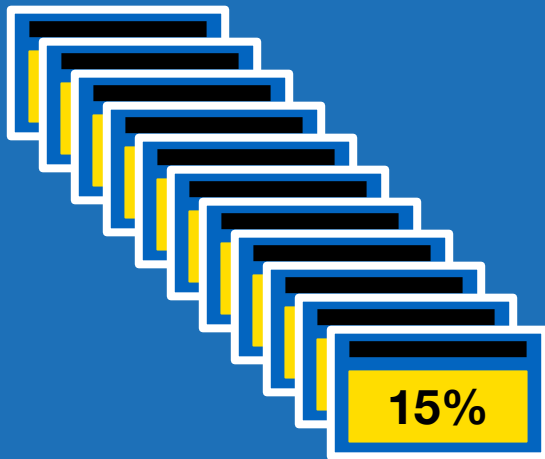
'15%'



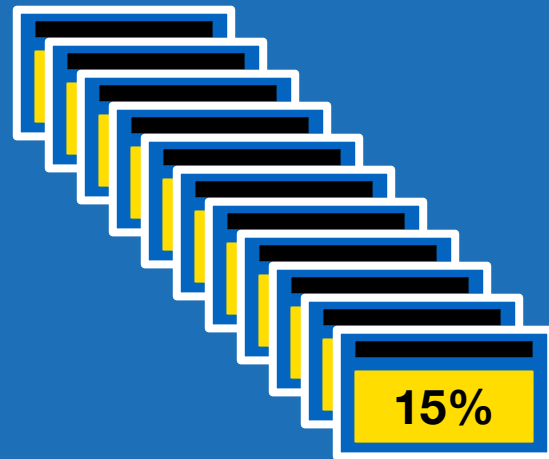
GOV.UK Web



GOV.UK Chat

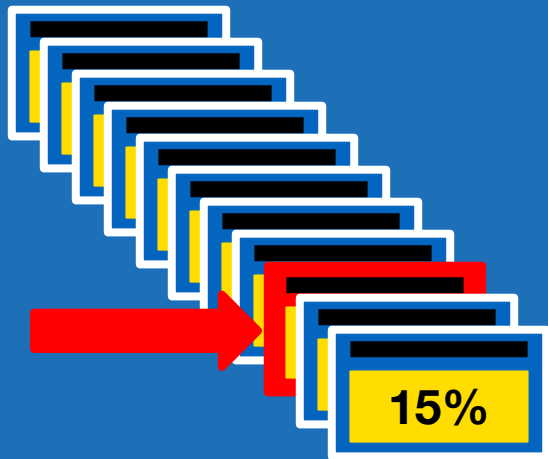


GOV.UK App

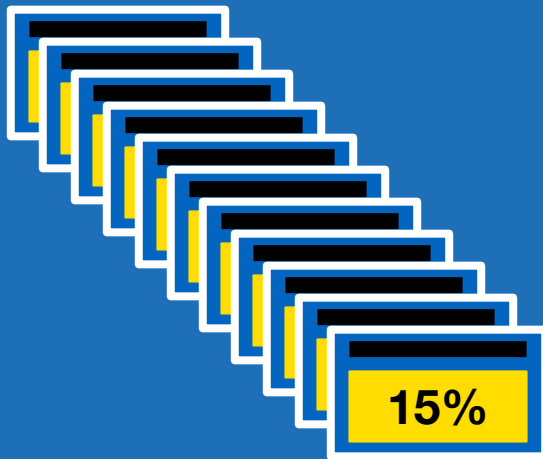




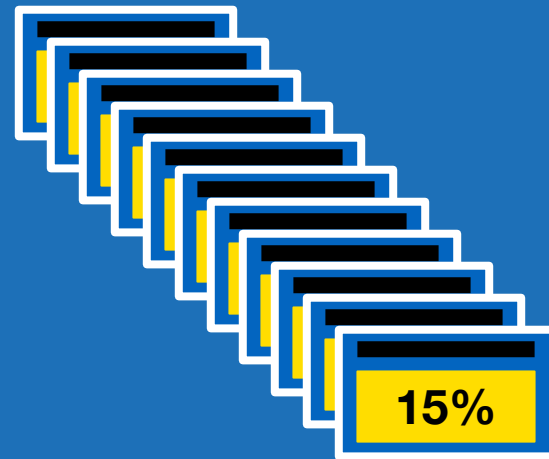
GOV.UK Web



GOV.UK Chat



GOV.UK App



Home > VAT

VAT rates

The standard VAT rate is 20%

This guide is also available [in Welsh \(Cymraeg\)](#).

VAT rates for goods and services

	% of VAT	What the rate applies to
Standard rate	20%	Most goods and services
Reduced rate	5%	Some goods and services, for example, children's car seats and home energy
Zero rate	0%	Zero-rated goods and services, for example, most food and children's clothes

The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%).

Some things are exempt from VAT, such as postage

“The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%).”

“The standard rate of VAT increased to 20% on 4 January 2011 (from 17.5%).”



“The standard rate of VAT increased to 15% on 4 January 2011 (from 17.5%).”



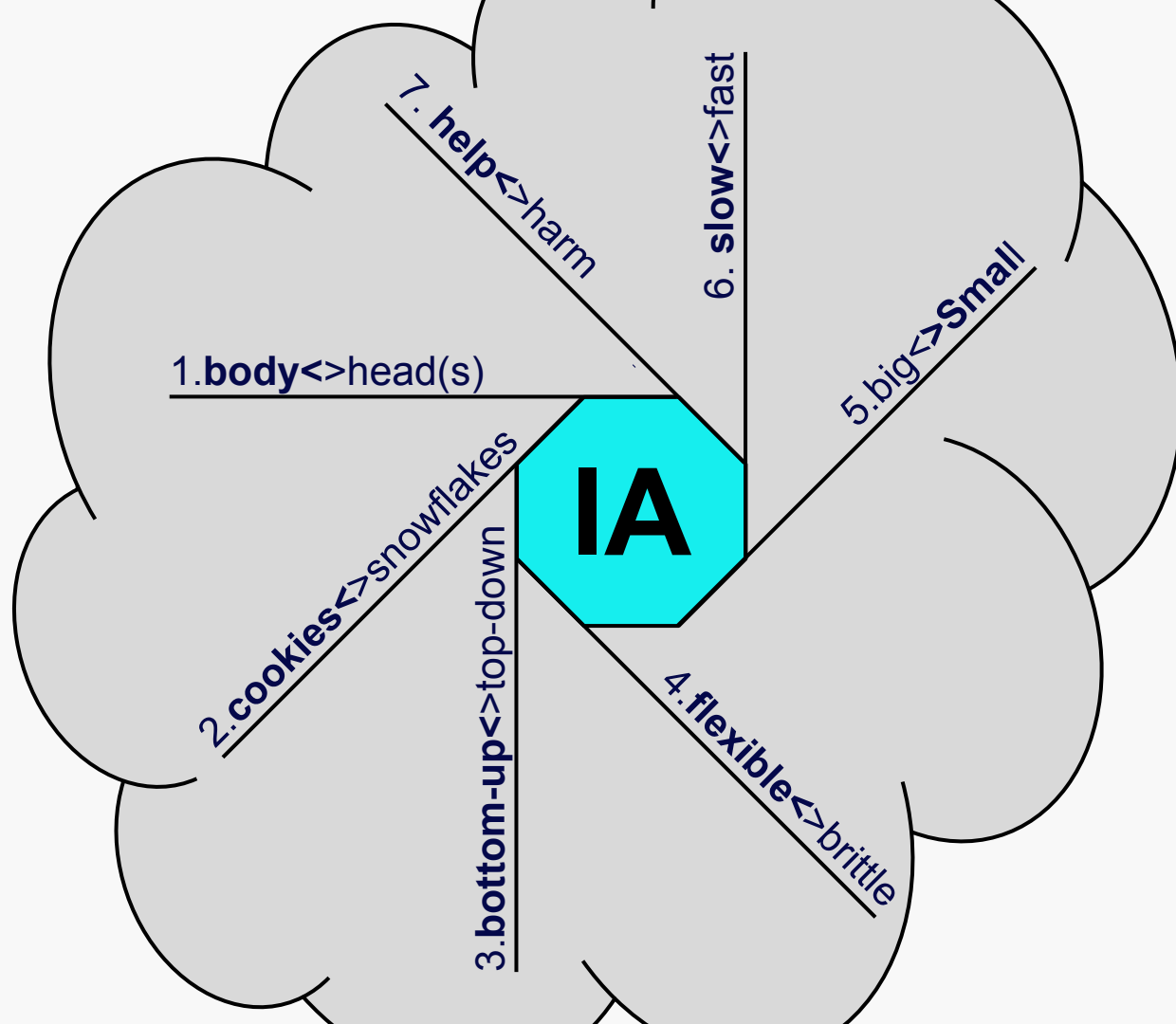
“The standard rate of VAT increased to 15% on 4 January 2011 (from 17.5%).”

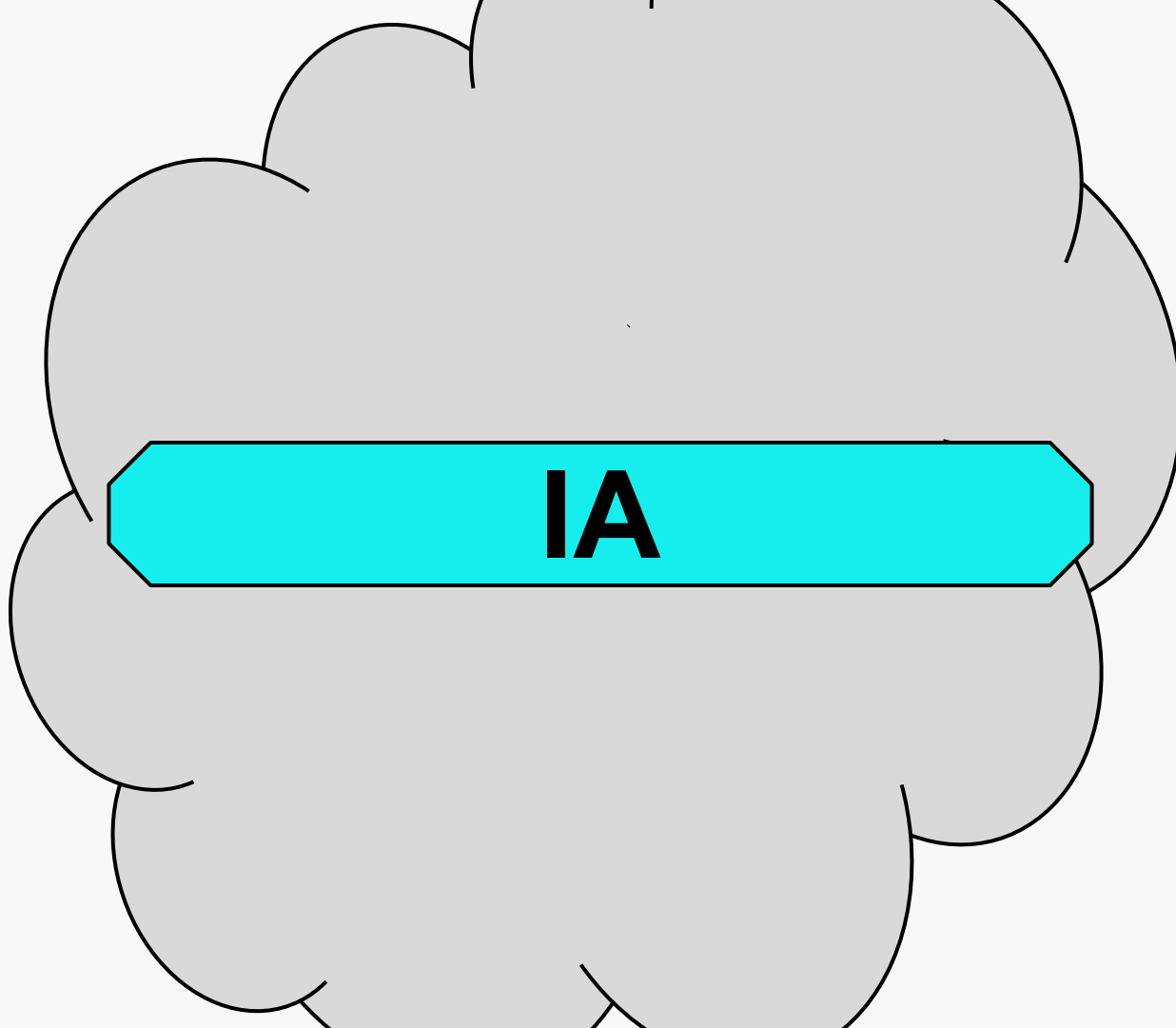
Summary

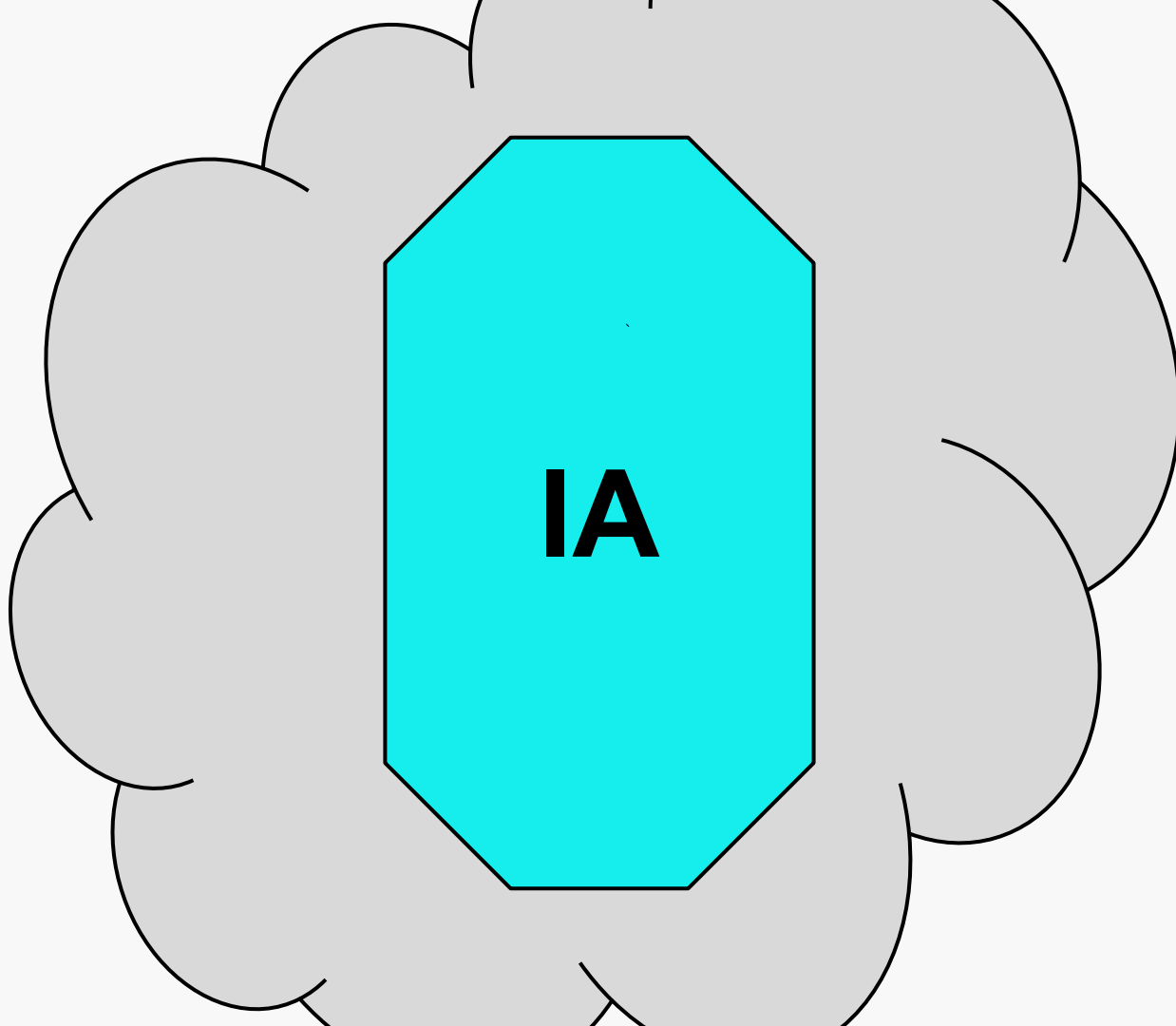


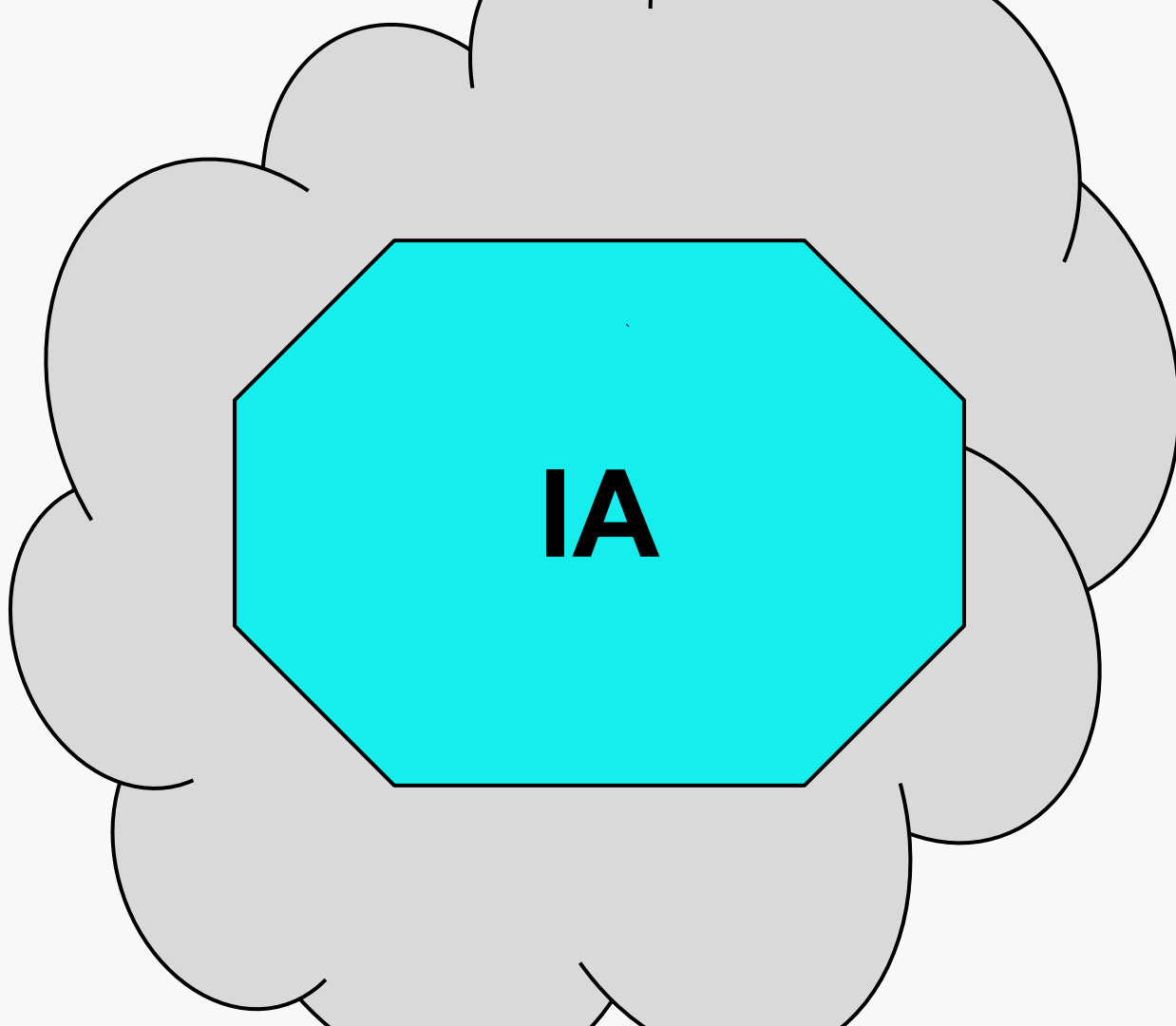
“With great [content design systems] comes great responsibility.”

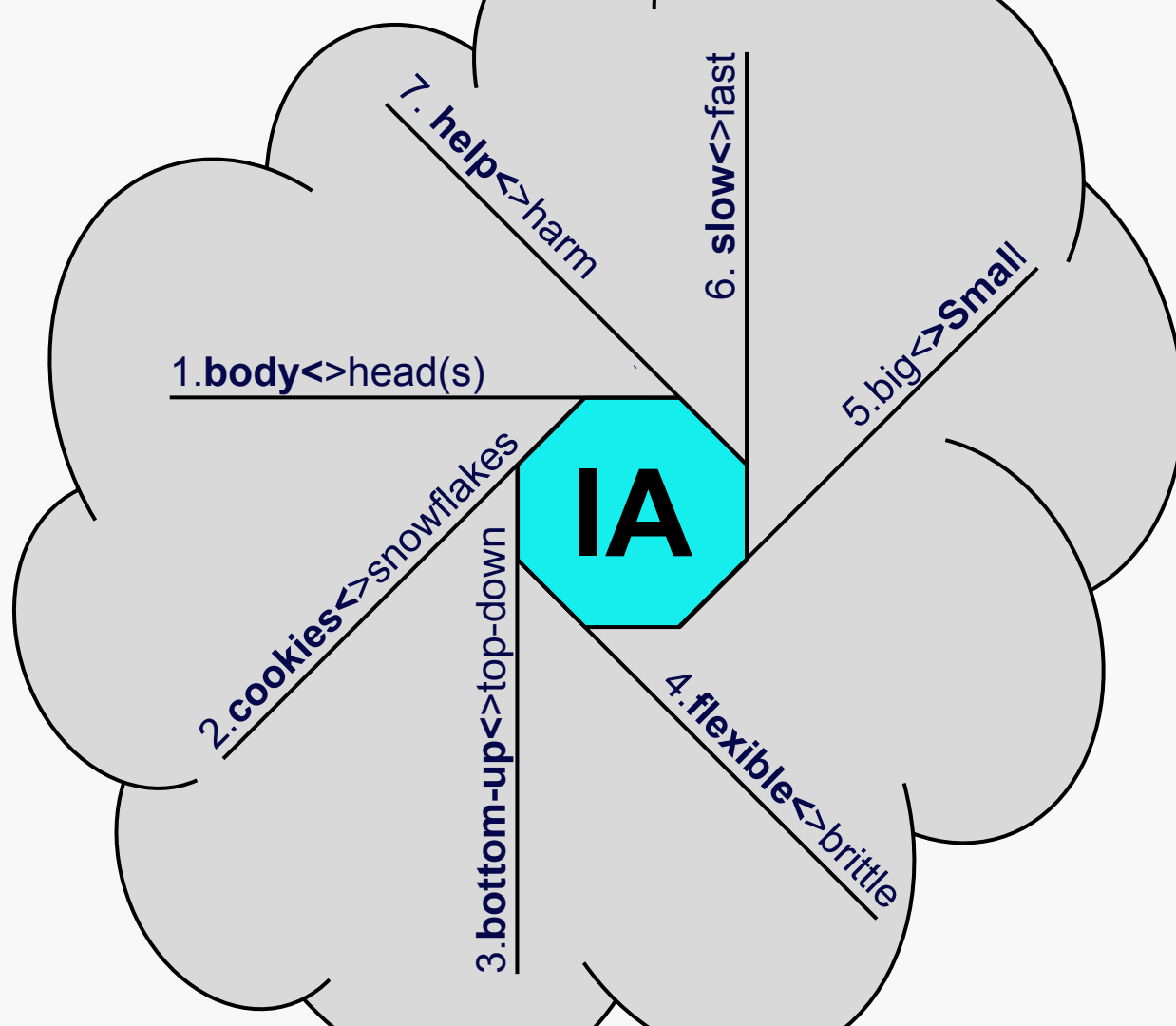
Voltaire













Government
Digital Service



Department for
Science, Innovation
& Technology

Rik Williams

Senior Information Architect
Government Digital Service
[linkedin.com/in/rikwilliams](https://www.linkedin.com/in/rikwilliams)



Discussion