

Parametric Design

#01 – Einführung

Prof. Dr. Sebastian Meier

Digitales Gestalten

Digitales Gestalten

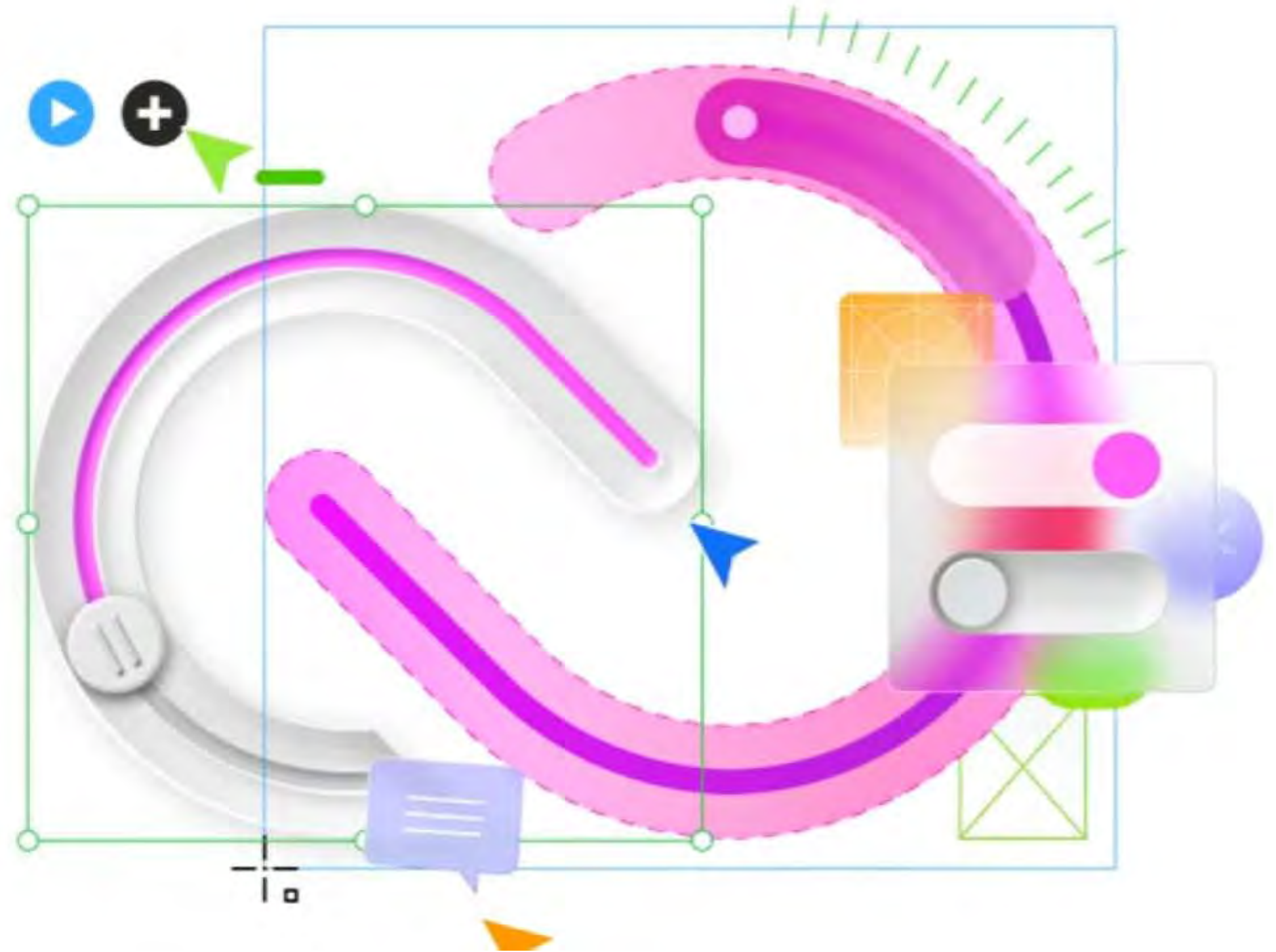


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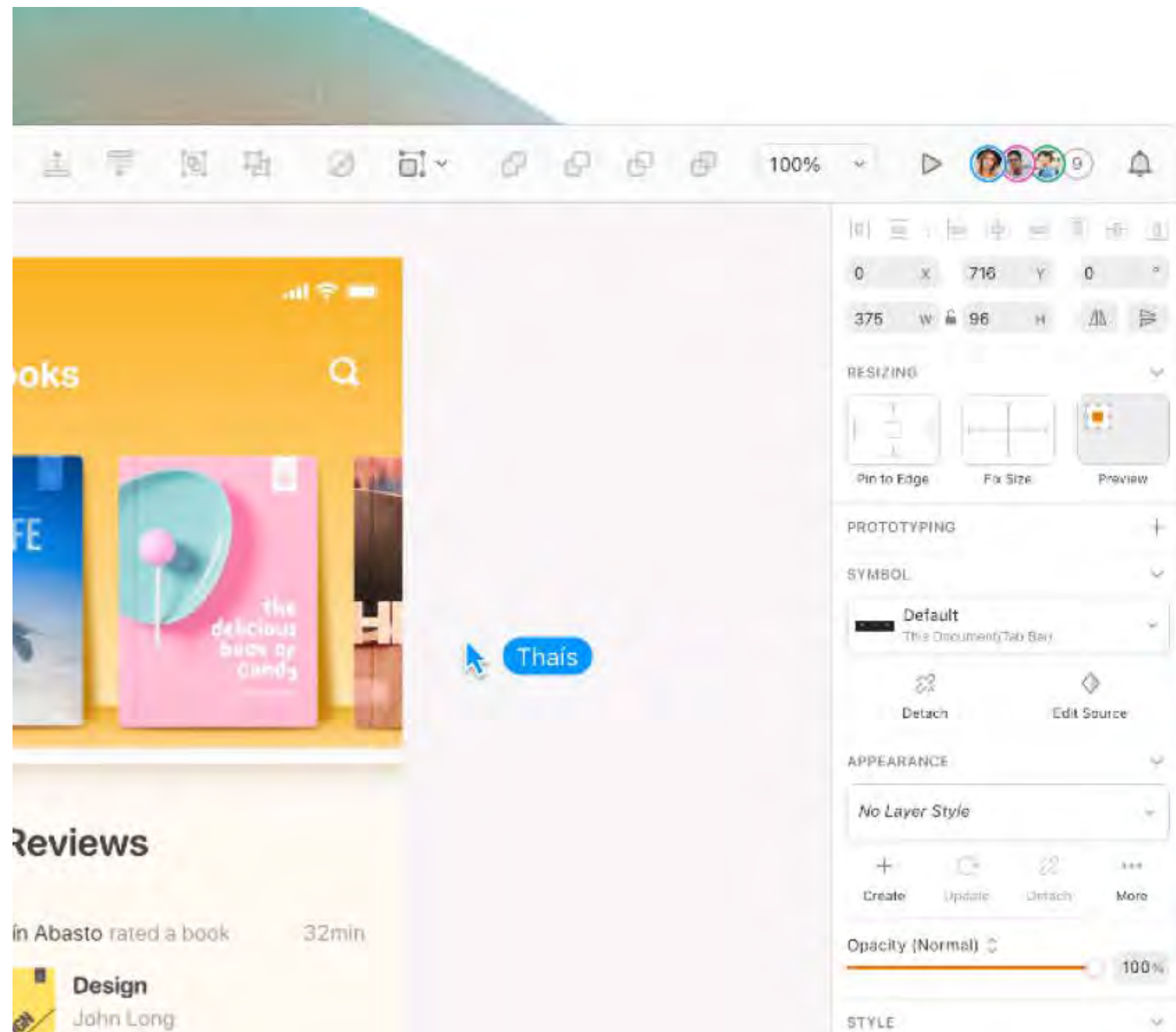
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Quelle: Screenshot adobe.com/creativecloud.html

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Digitales Gestalten



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Whether you're collaborating on new concepts, freshening up an old flow or crowning an app with the perfect icon, we've got you covered for your whole design process.

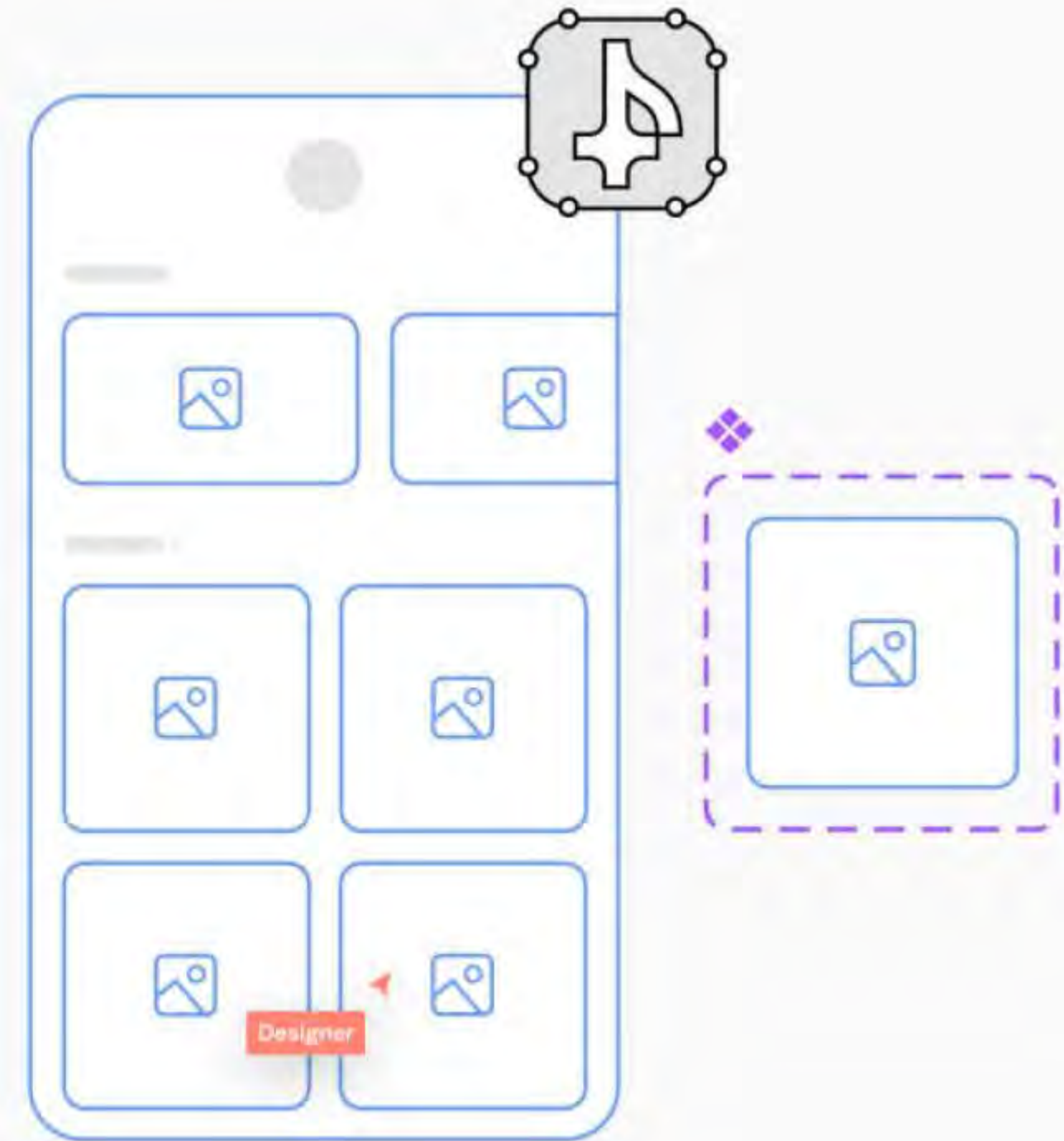


Quelle: Screenshot sketch.com

Digitales Gestalten

Bring those ideas to life

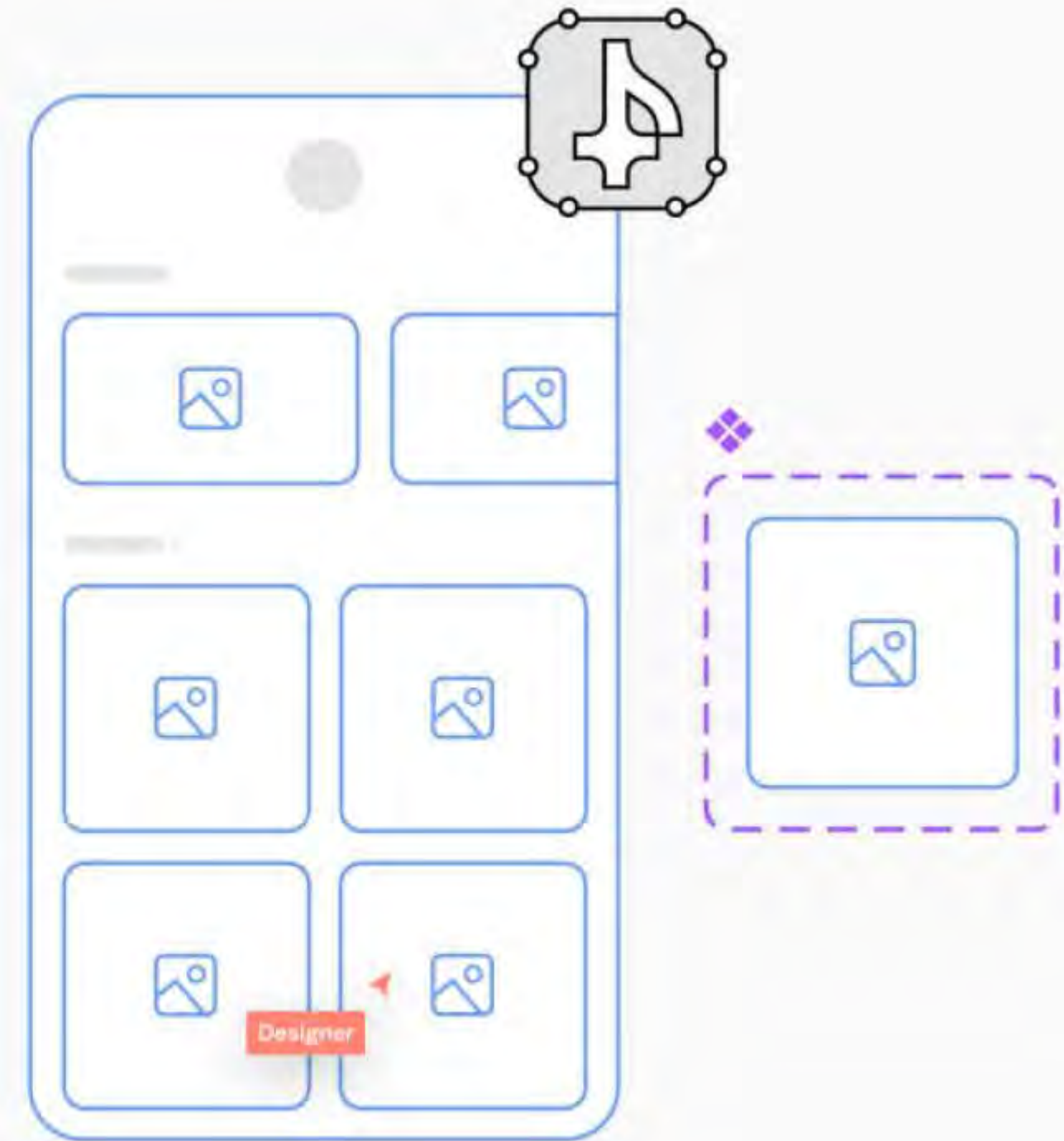
FigJam and Figma live side-by-side, so all design work, from ideation to execution, can be found in one place.



Digitales Gestalten

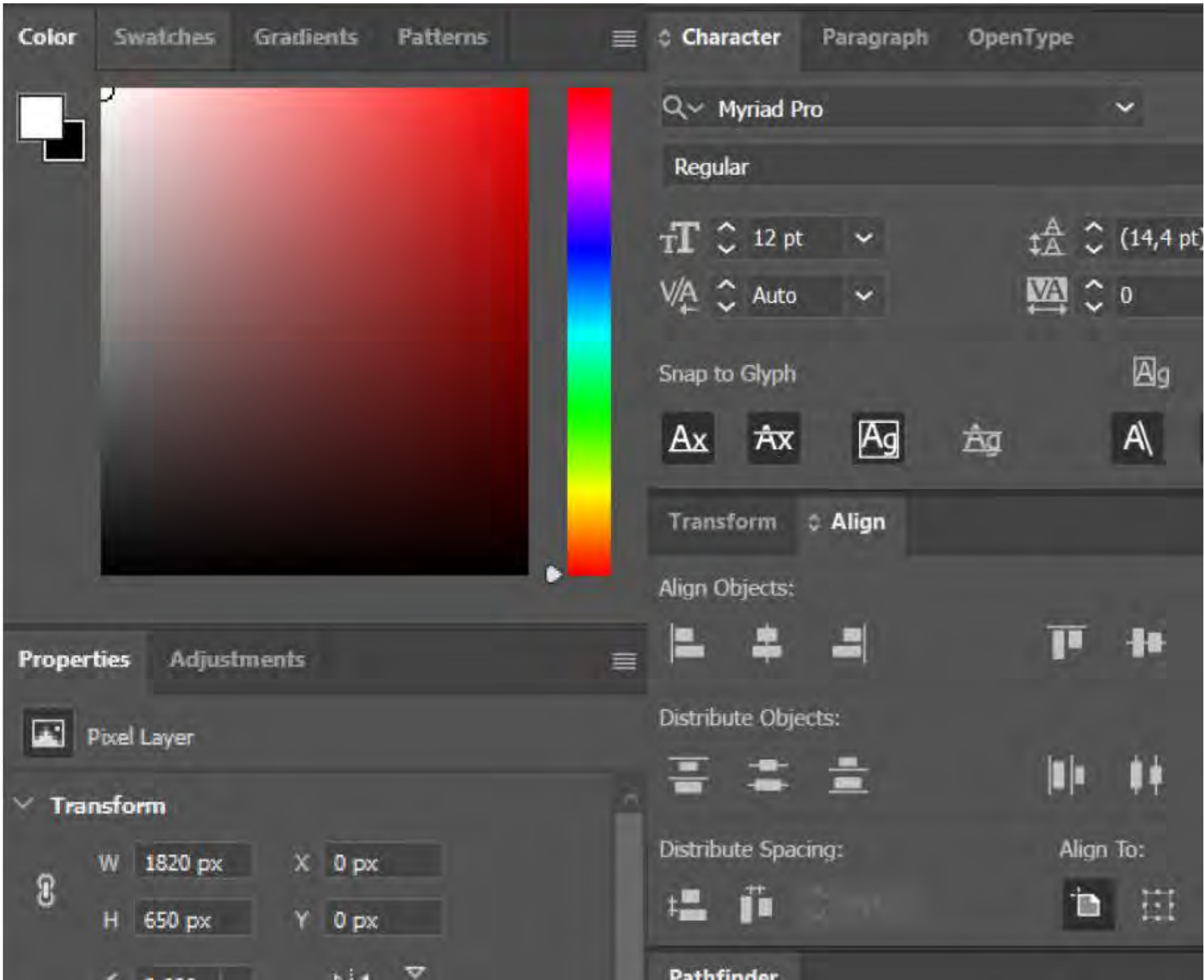
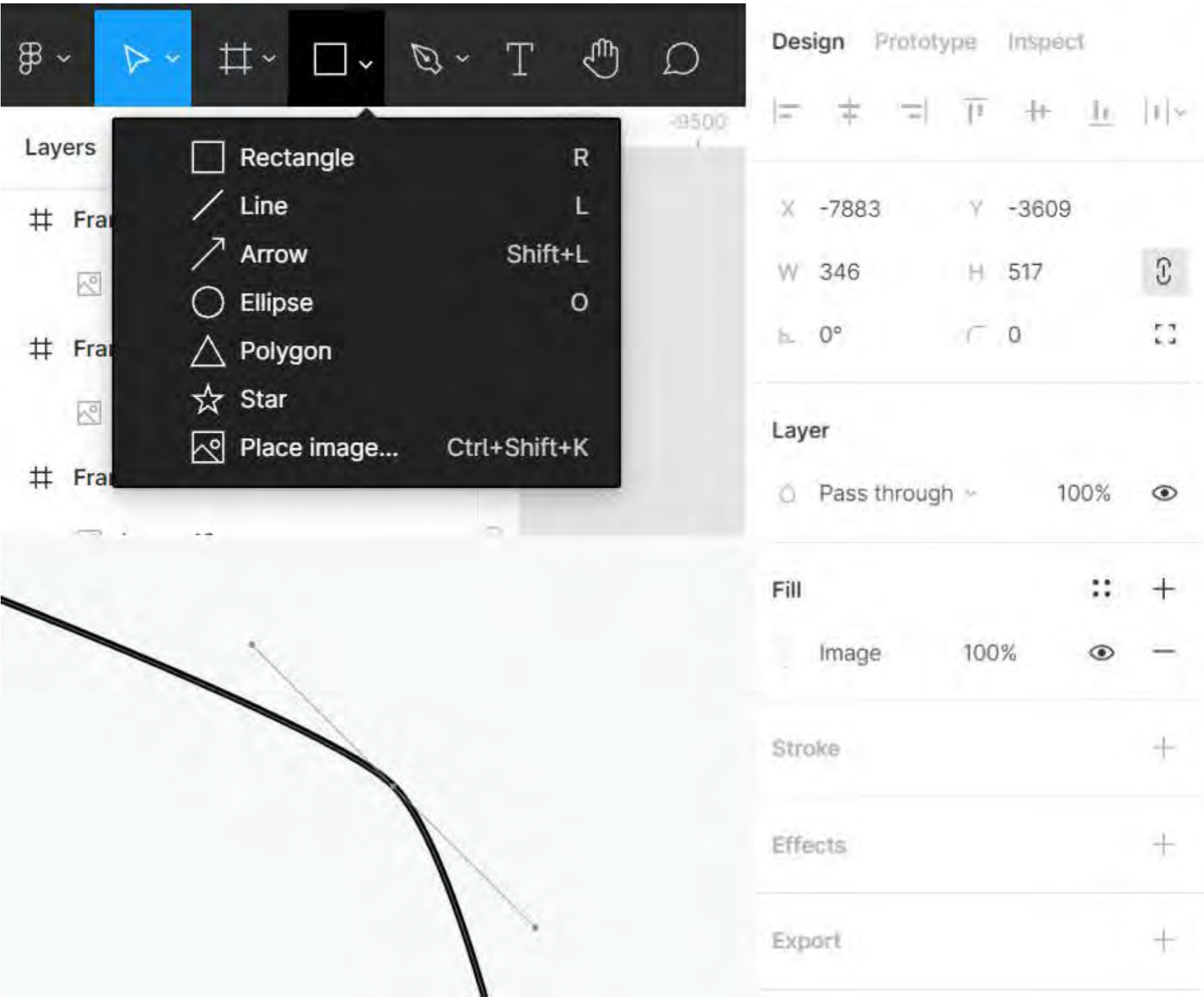
Bring those ideas to life

FigJam and Figma live side-by-side, so all design work, from ideation to execution, can be found in one place.



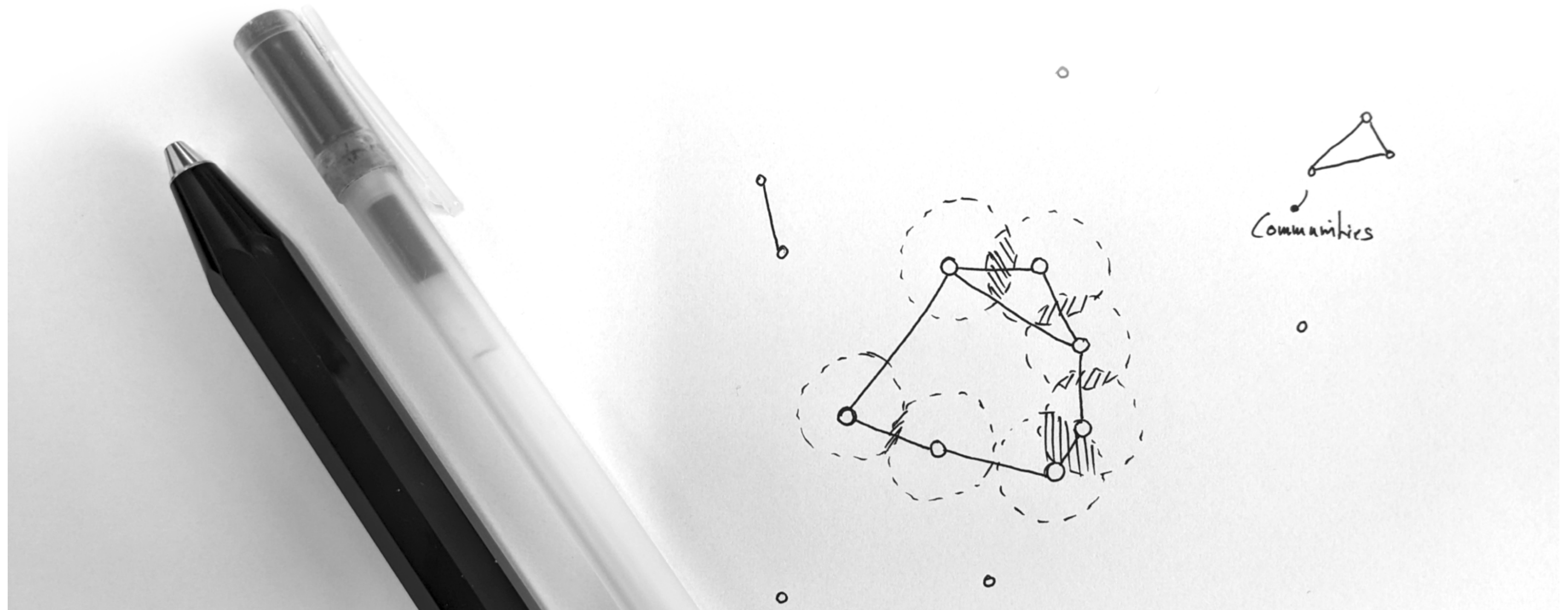
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Digitales Gestalten



Quelle: Screenshots Adobe Illustrator/Photoshop, Figma

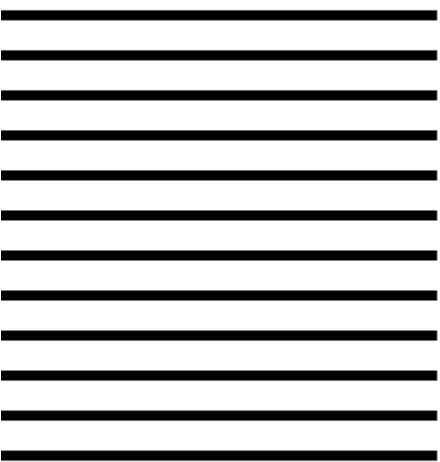
Digitales Gestalten



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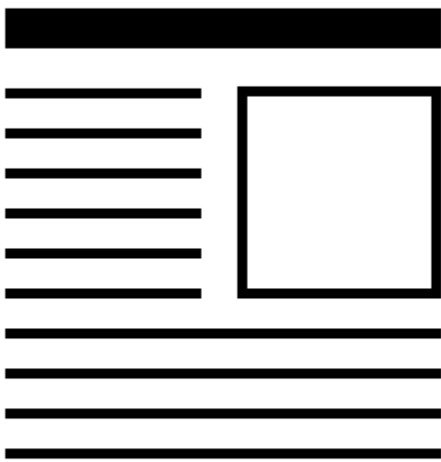
Design Formate

Reiner Text



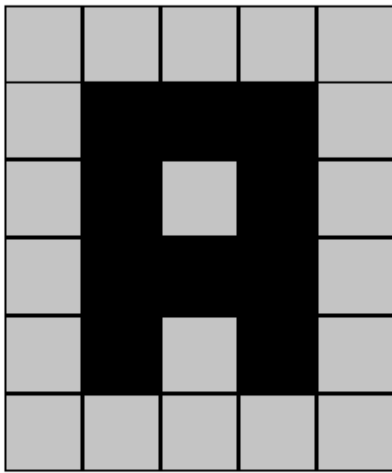
Text

Layout Dokumente



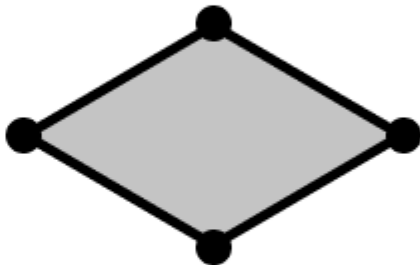
versch. Markup

Bilder



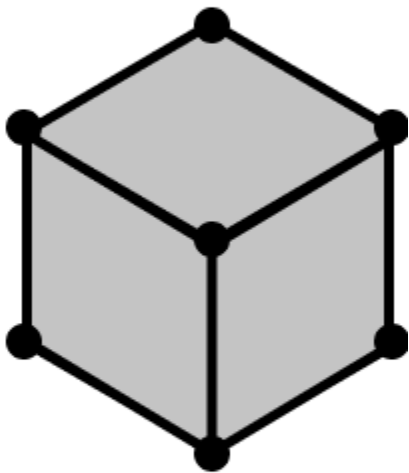
Pixel

Vector 2D



versch. Vektorstrukturen

Vector 3D



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Design Formate

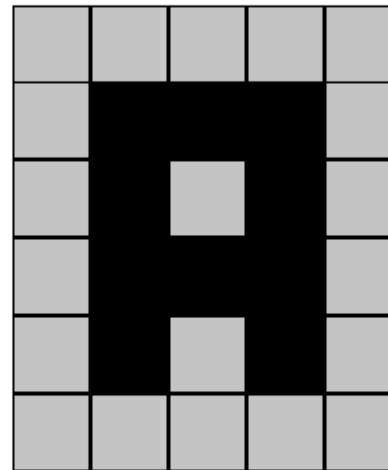
Reiner Text



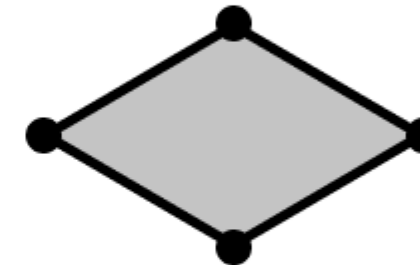
Layout Dokumente



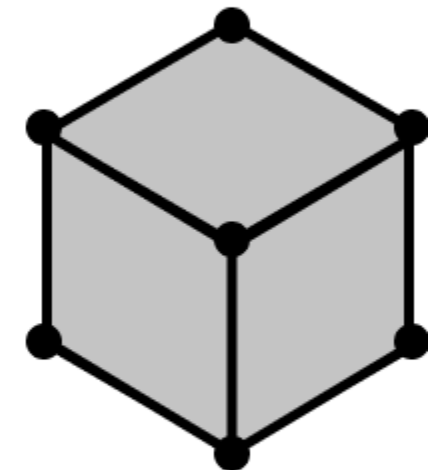
Bilder



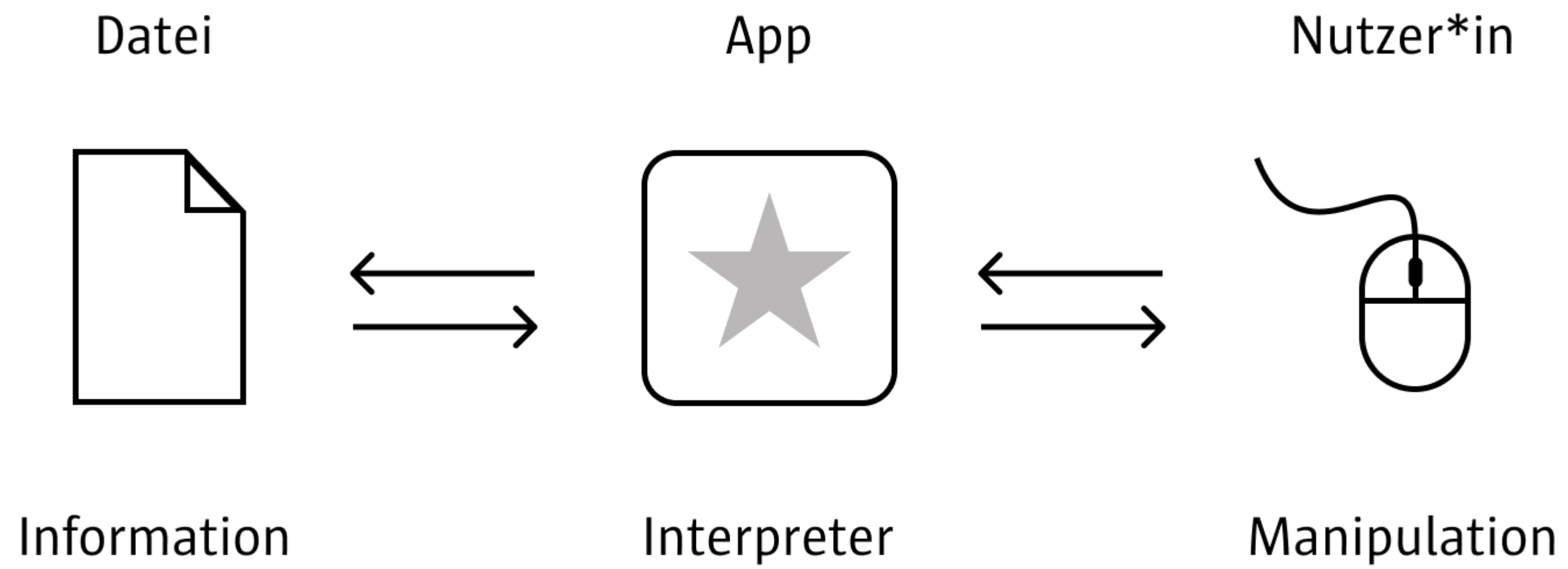
Vector 2D



Vector 3D

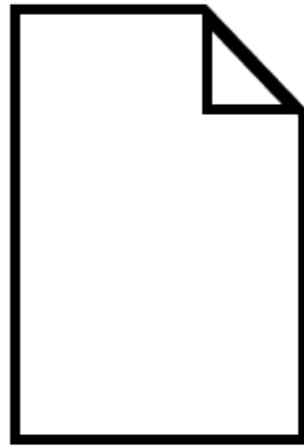


Software im Design-Prozess

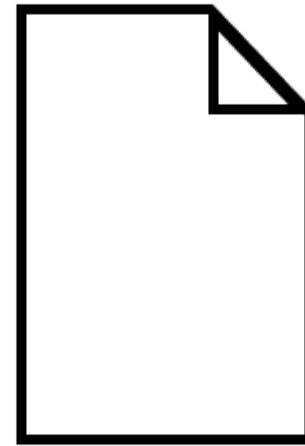


Software im Design-Prozess

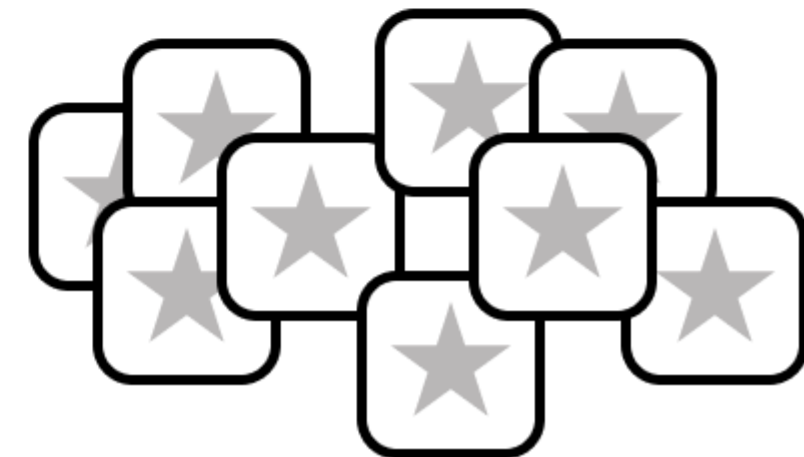
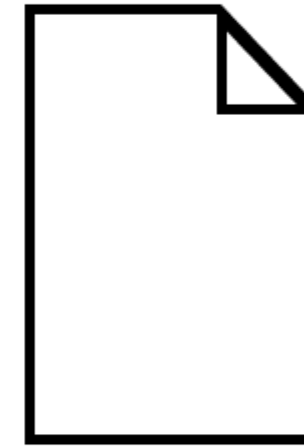
Proprietäre Formate



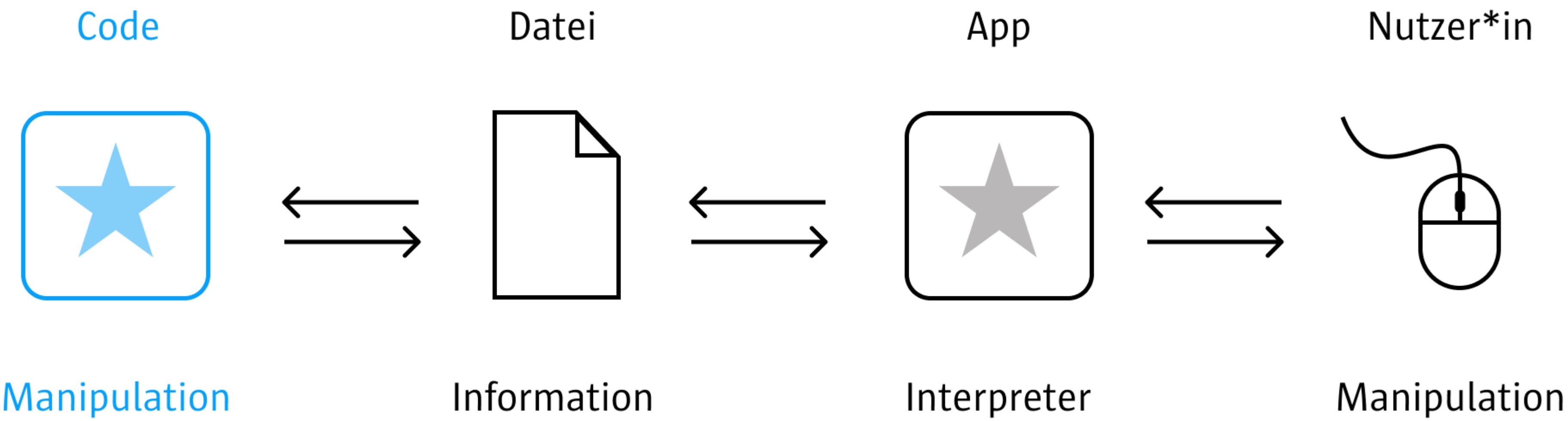
Offene Formate



Standardisierte
offene Formate

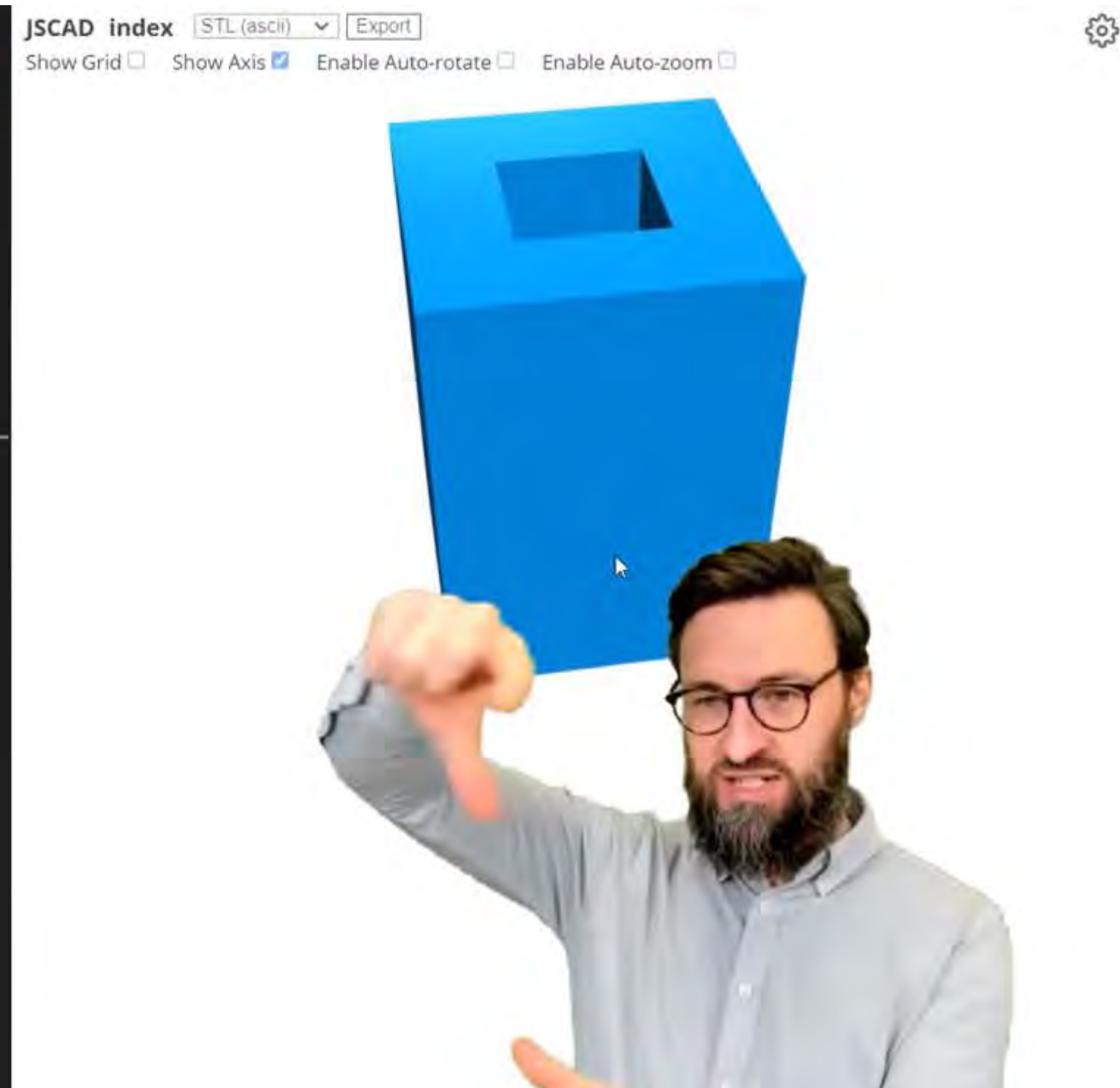


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Parametric Design

```
code > first-3d-example > JS index.js > [x] main > [x] extrObj > size
/
const {translate, rotate, scale, center, align}
8
9
const main = () => {
10   const objects = [];
11
12   let rect = rectangle({
13     center: [0,0,0],
14     size: [50, 50]
15   });
16
17   objects.push(rect);
18
19   const extrObj = extrudeRectangular({
20     height: 100,
21     size: 10
22   }, rect);
23
24   objects.push(extrObj);
25
26   return objects;
27 };
28
29 module.exports = { main };
```



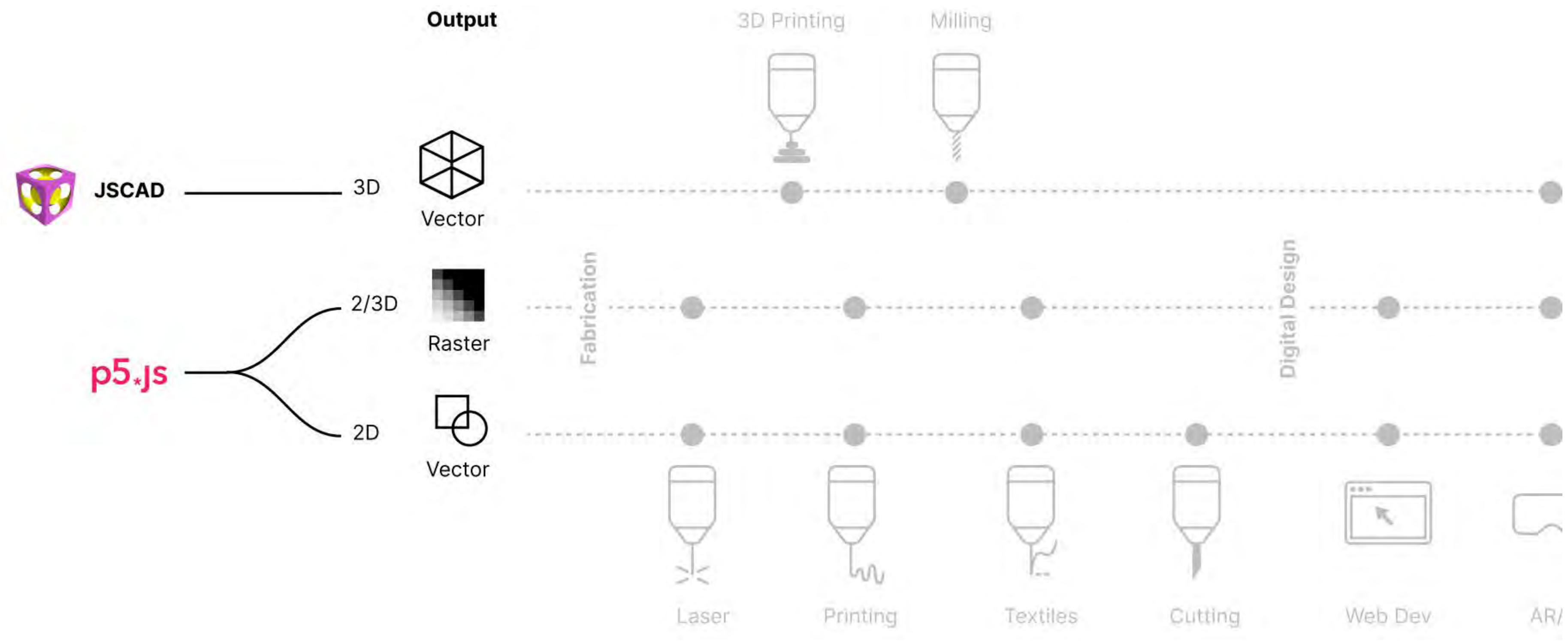
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```
code > first-example > JS sketch.js > draw
9  // let seed = 0;
10 let offset = 0;
11
12 function draw() {
13   background(255);
14   fill(0);
15
16   noStroke();
17
18   for (let x = 0; x <= 400; x += 10) {
19     for (let y = 0; y <= 400; y += 10) {
20       fill(noise(x/100, y/100) * 255);
21       rect(x, y, 10, 10);
22     }
23   }
24
25   // noiseSeed(seed);
26   // seed += 1;
27
28   offset += 0.01;
29
30   noLoop();
31 }
32
```

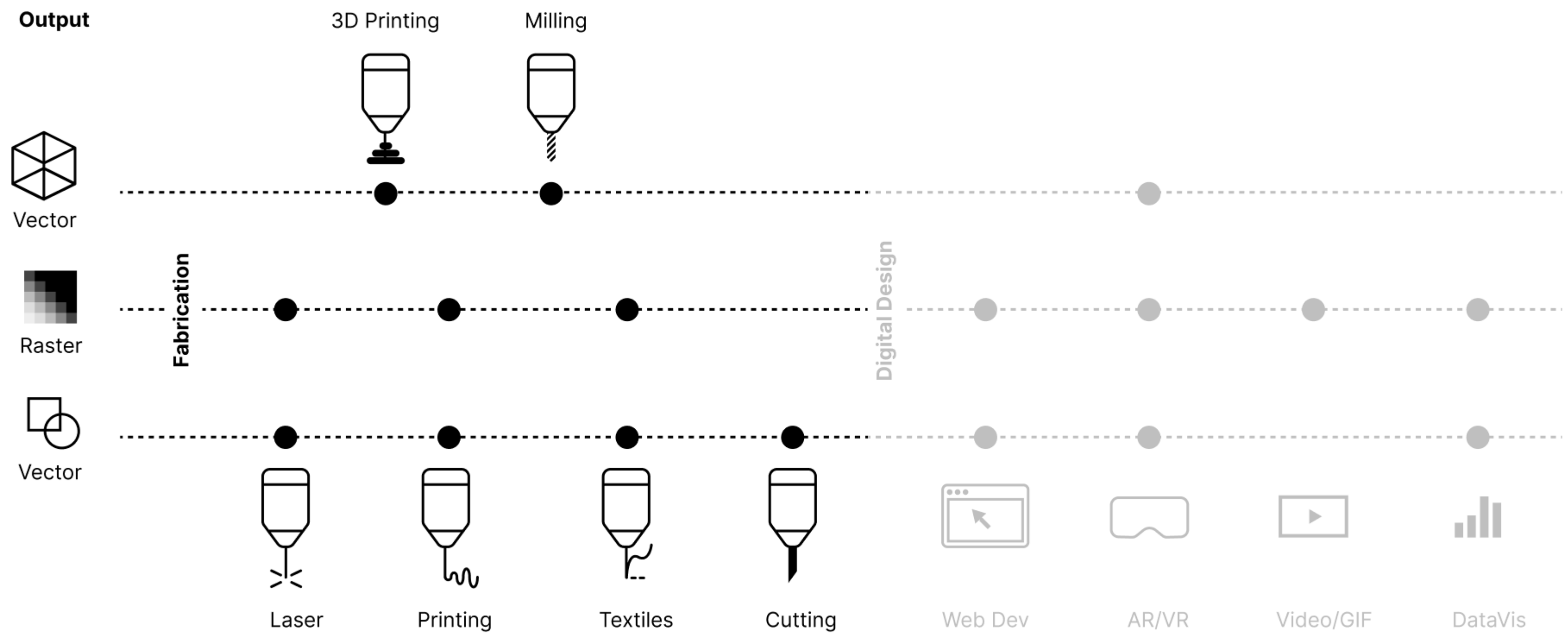


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Parametric Design

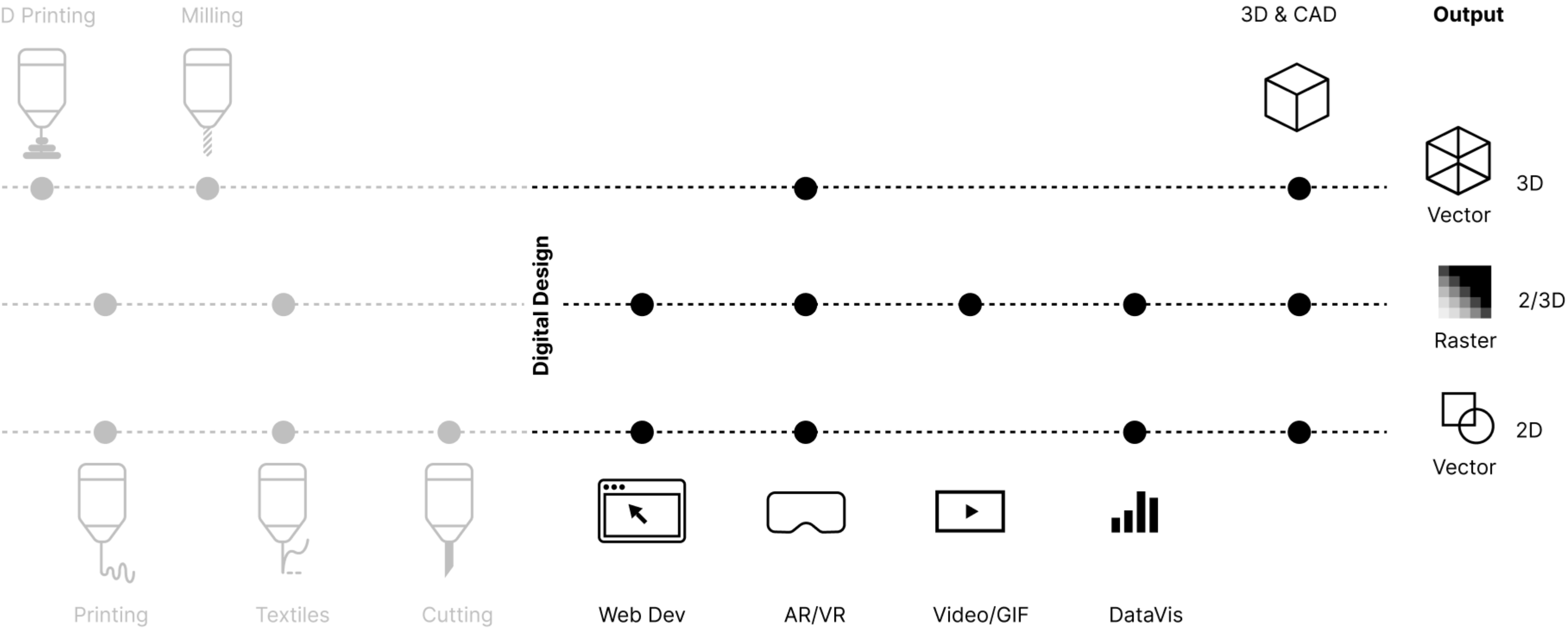


Parametric Design



Parametric Design – Einführung

Parametric Design

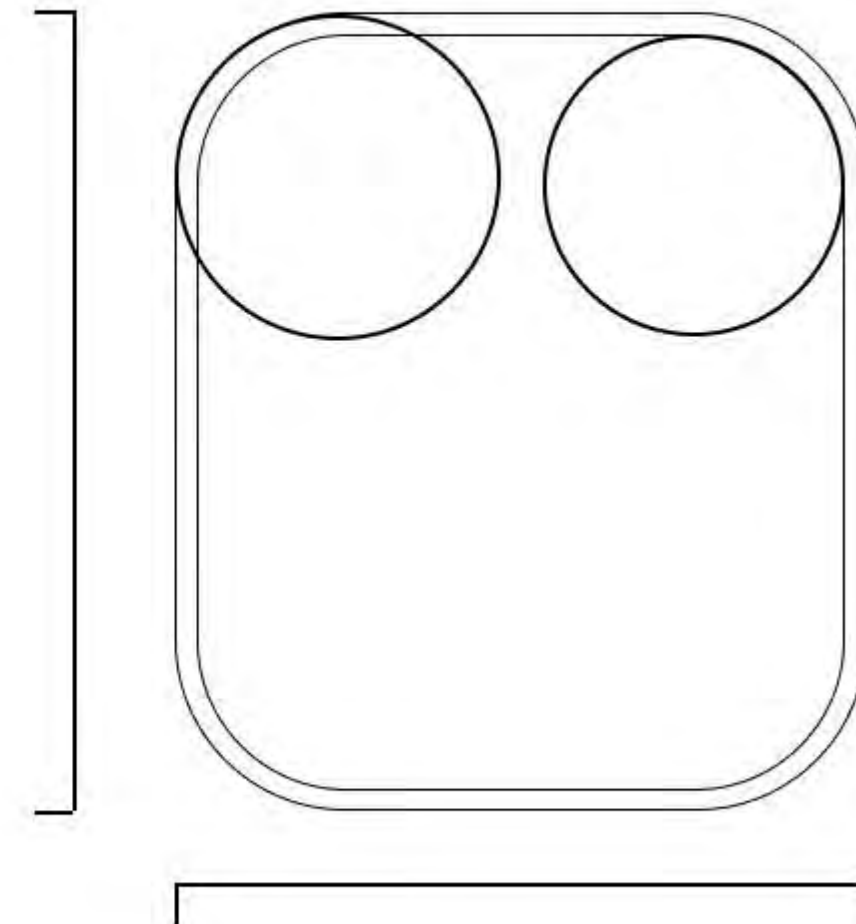
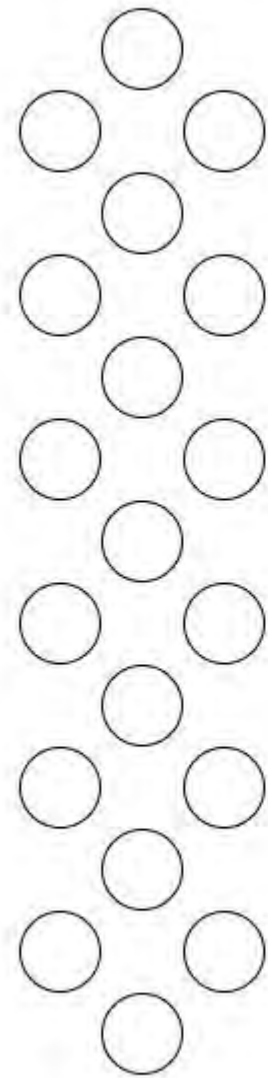


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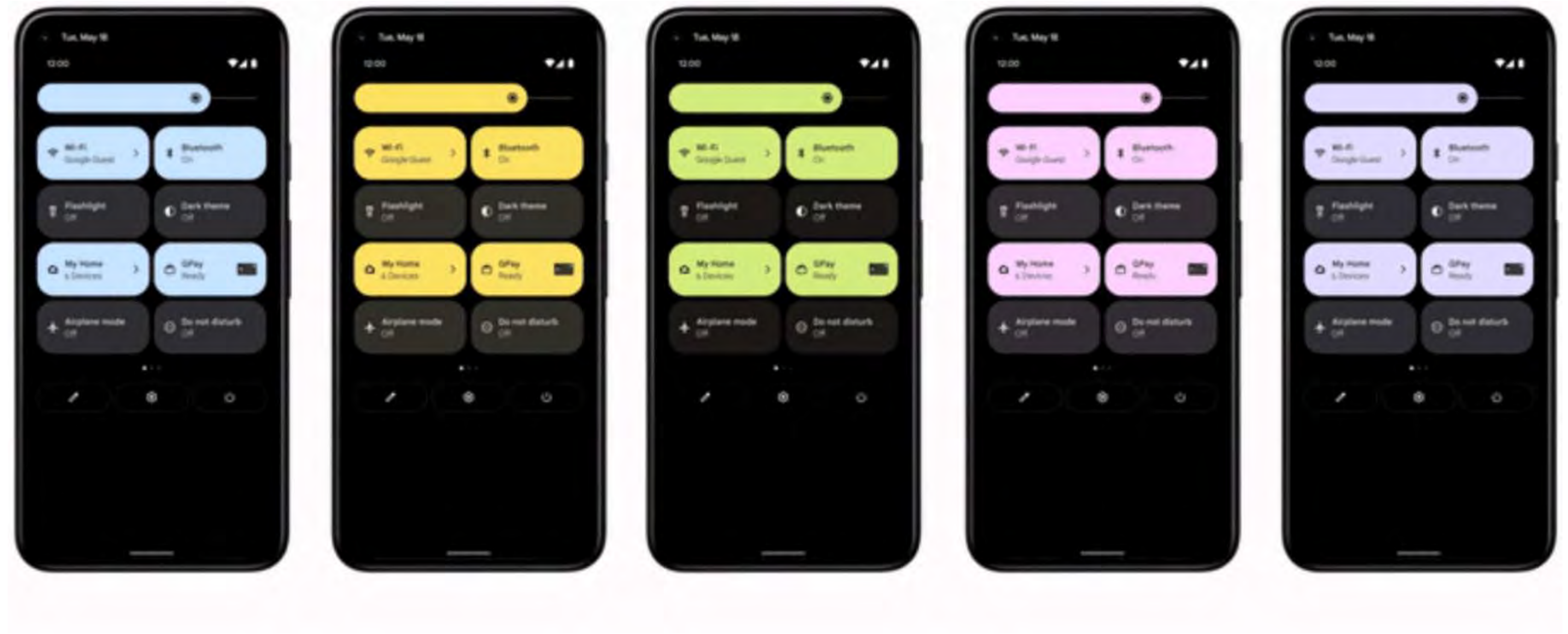
Parametric Design

Was ist Parametric Design?

Thinking in systems

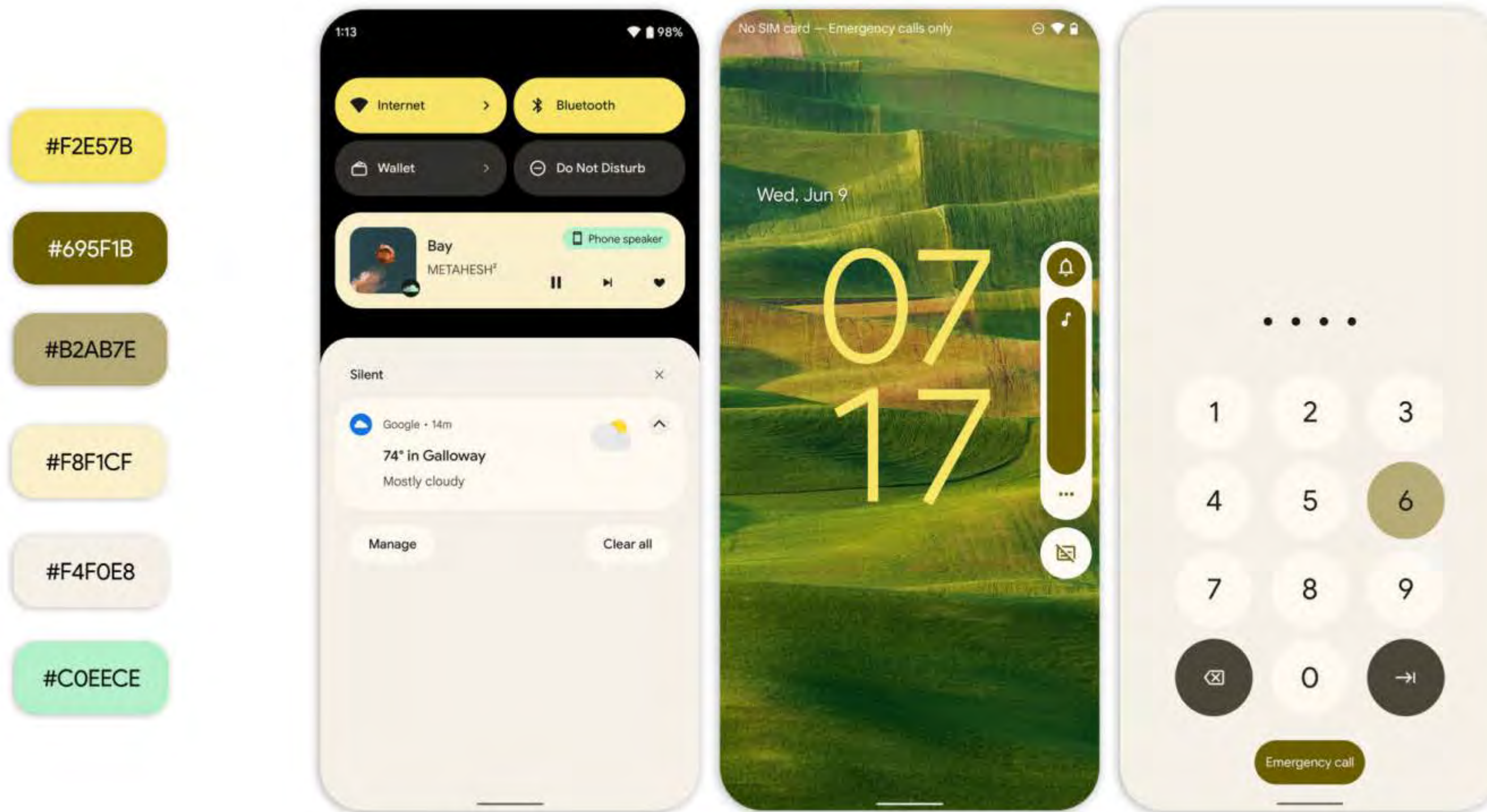


Thinking in systems



Quelle: <https://blog.google/products/android/android-12-beta/>

Thinking in systems

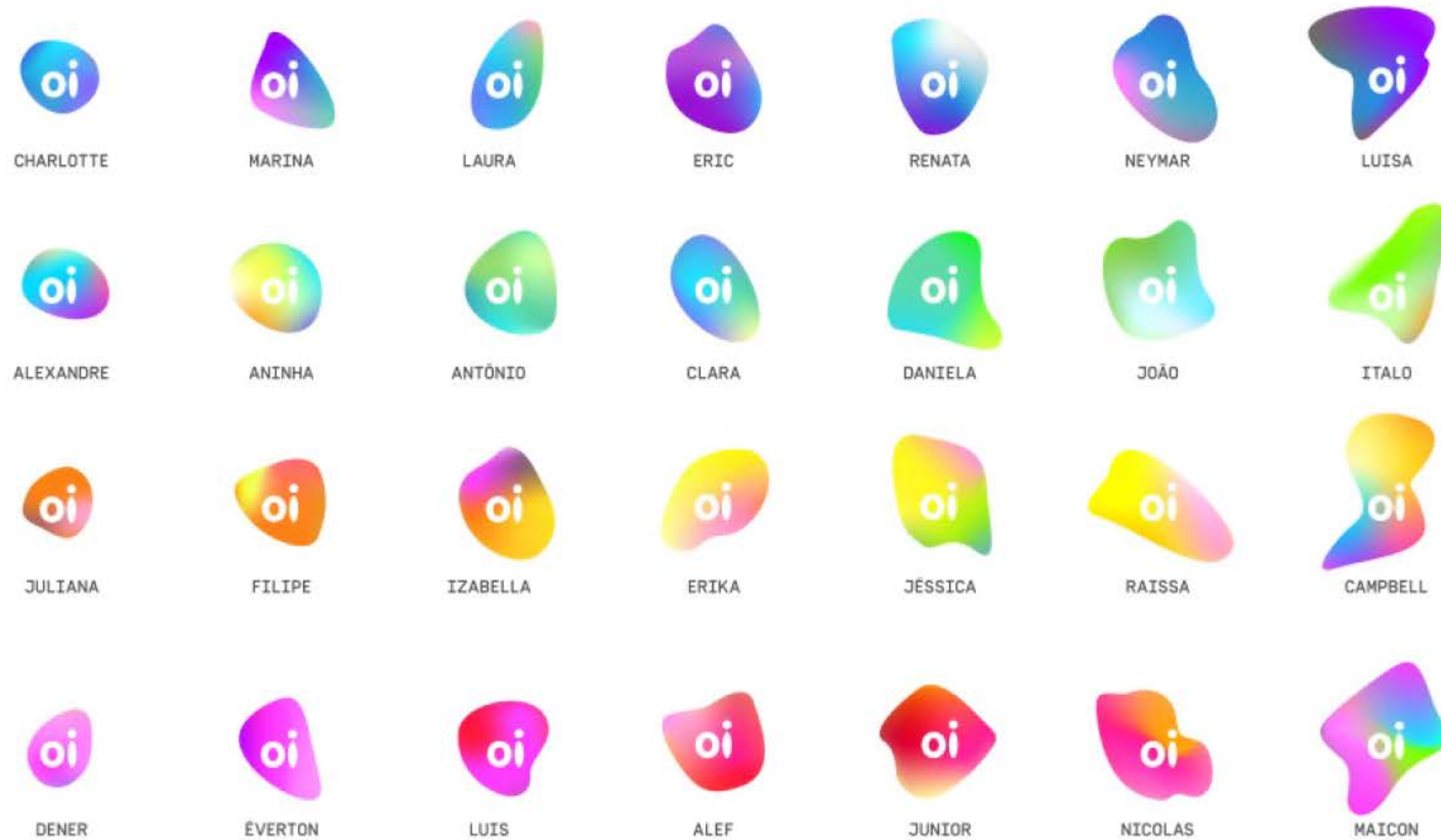


Quelle: ArsTechnica.com, Ron Amadeo

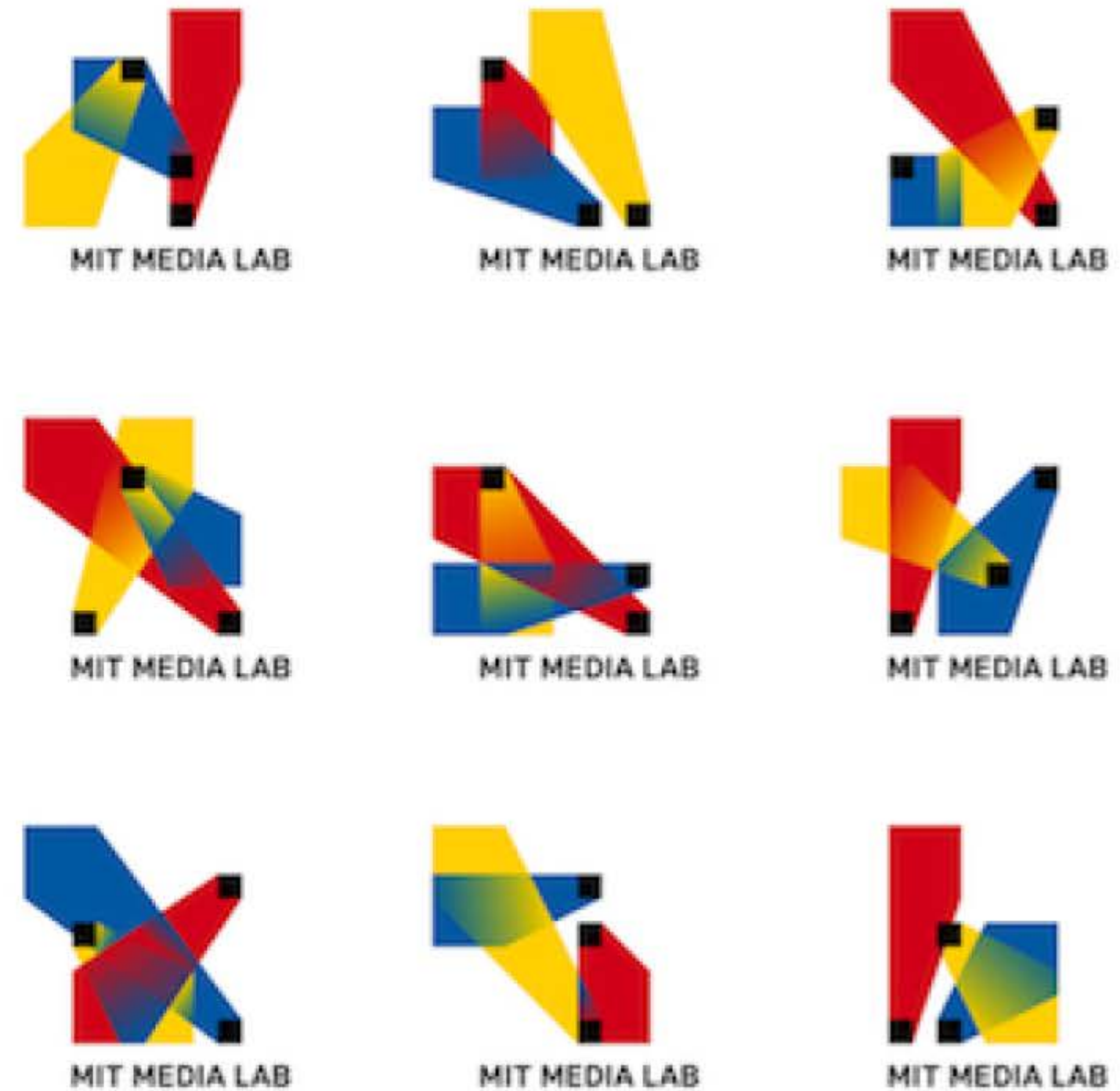
Applied Parametric Design



Applied Parametric Design



Applied Parametric Design



Applied Parametric Design

The poster features a light cream background with numerous diagonal streaks in shades of purple and blue. The text is centered and reads:

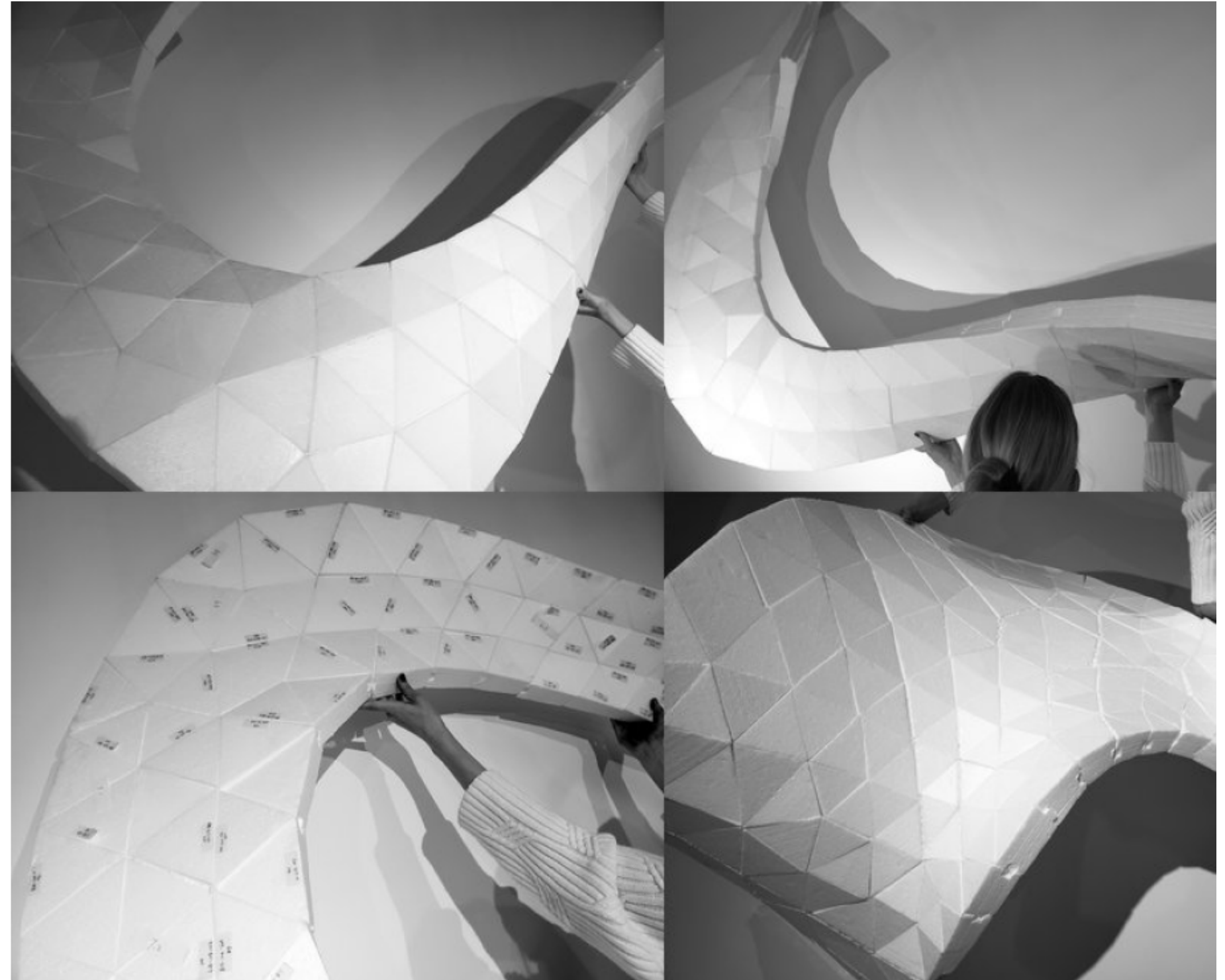
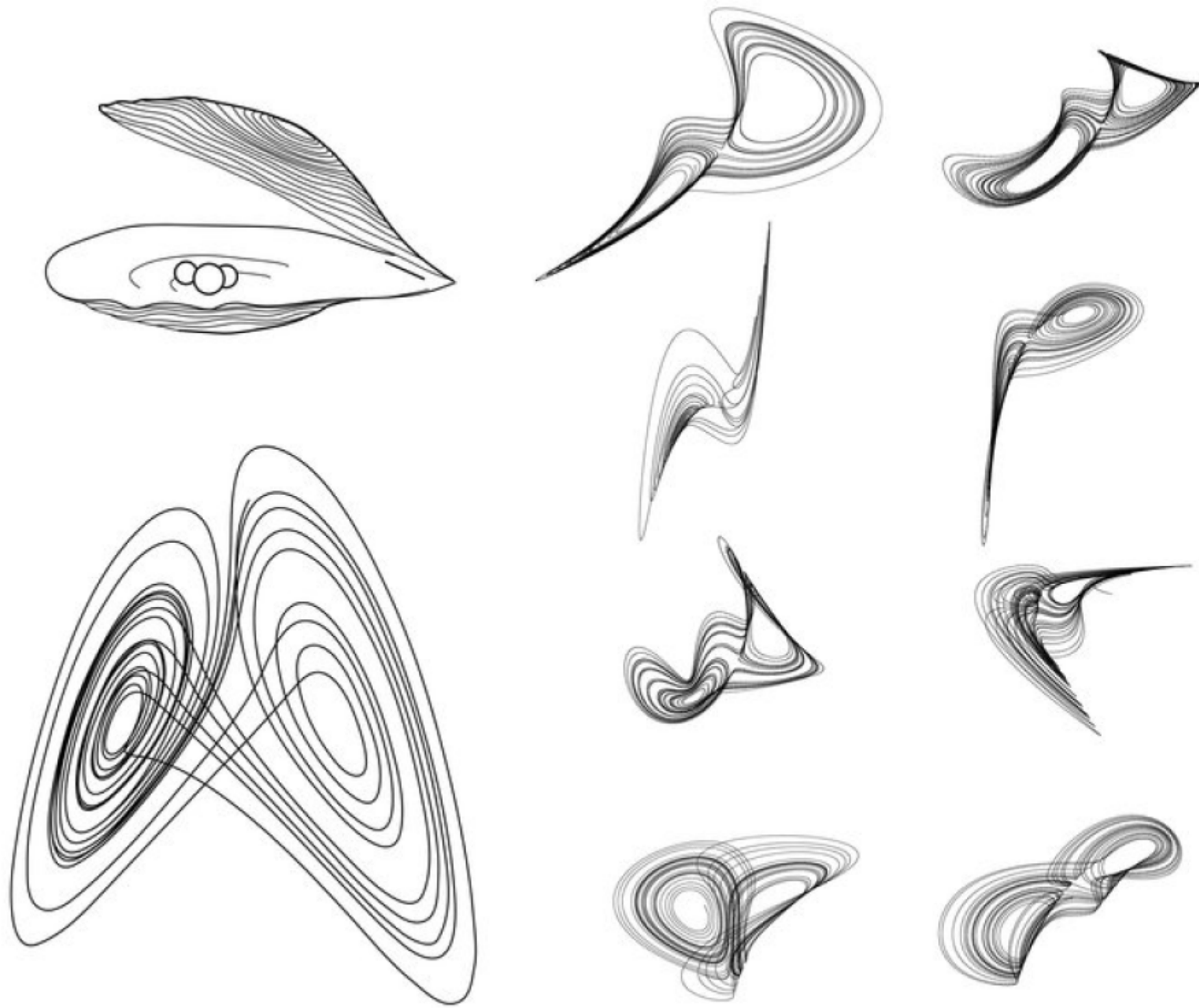
Information+ Conference 2021

Interdisciplinary practices in information design & visualization

Online, 27th September – 1st October 2021

#infoplus2021

Applied Parametric Design



Quelle: [Fischer et al 2019](#)

Applied Parametric Design



Quelle: [Studio Symbiosis](#)

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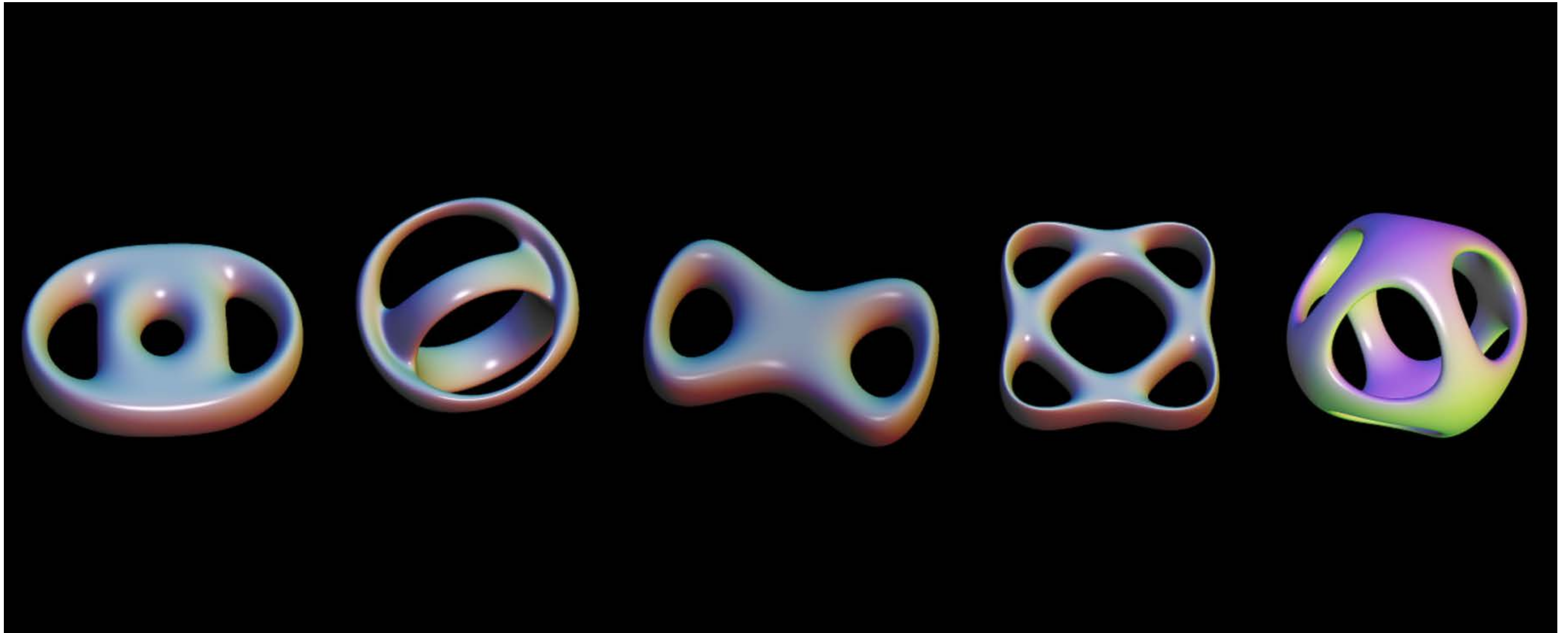
Quelle: [Laminar Flow](#)

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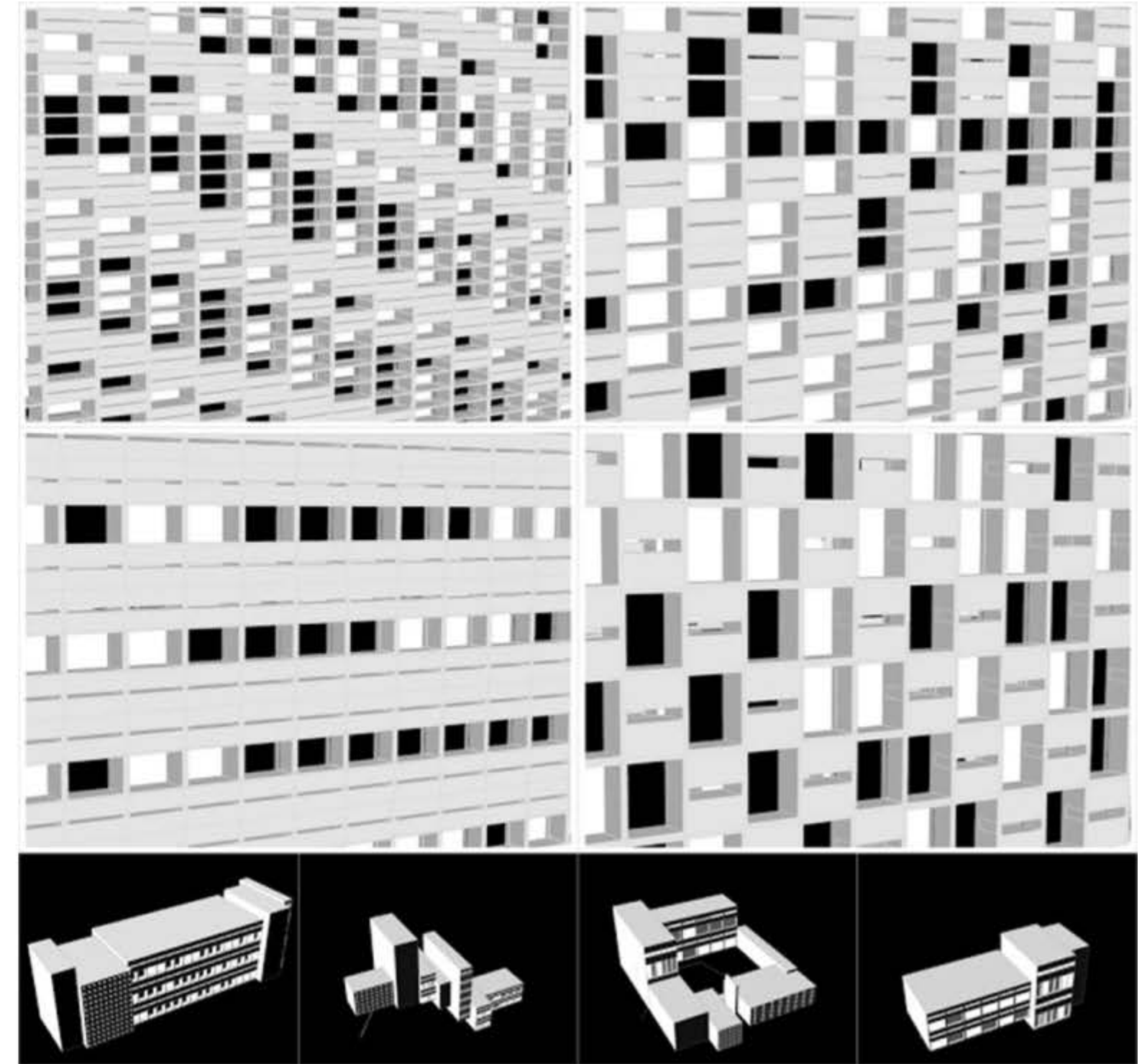
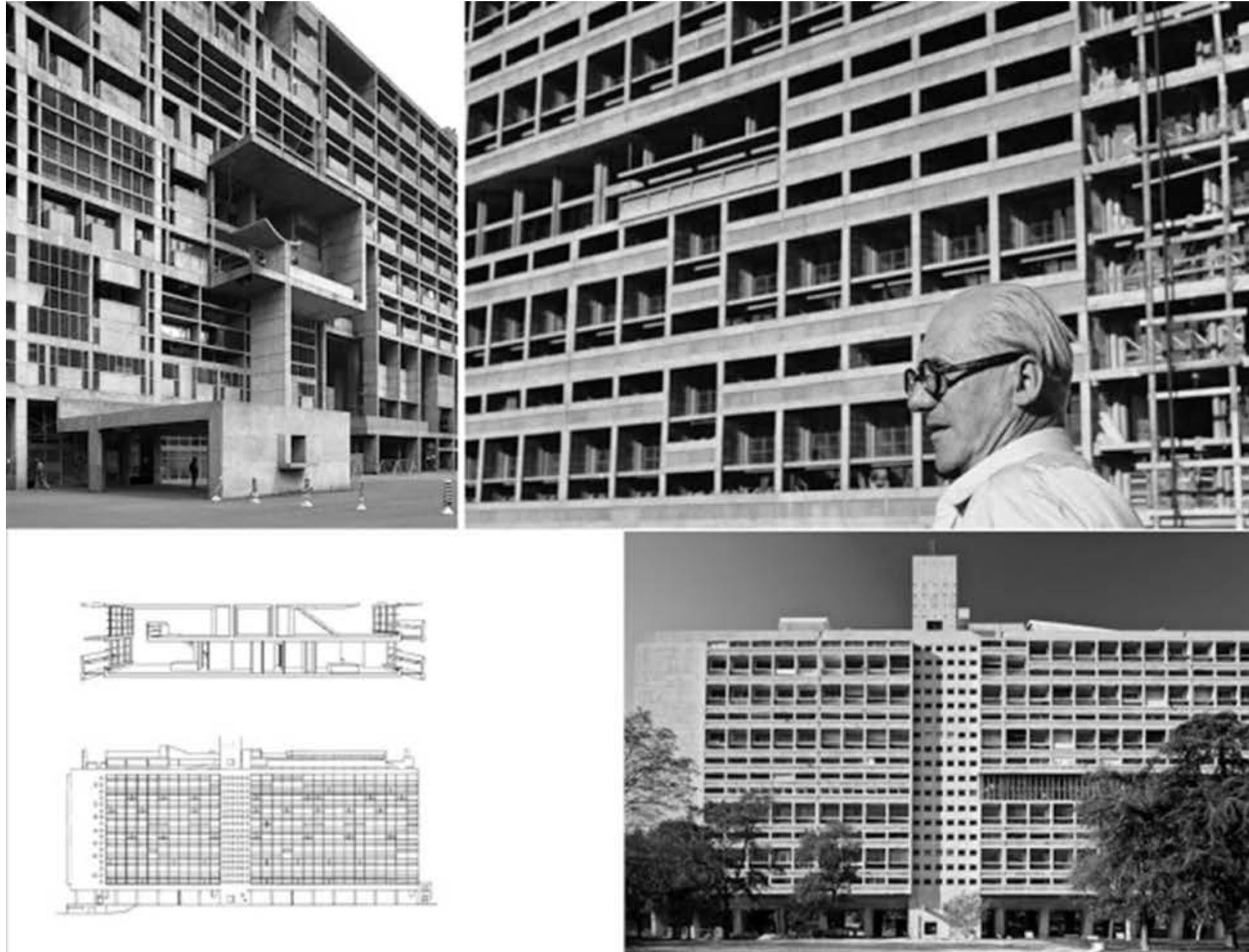
Quelle: [Oleg Soroko](#)

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Quelle: Virtual Math Museum

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Quelle: [Parametric Design Blog](#)

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Quelle: [IGS Mag](#)

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Quelle: [Parametric House](#)

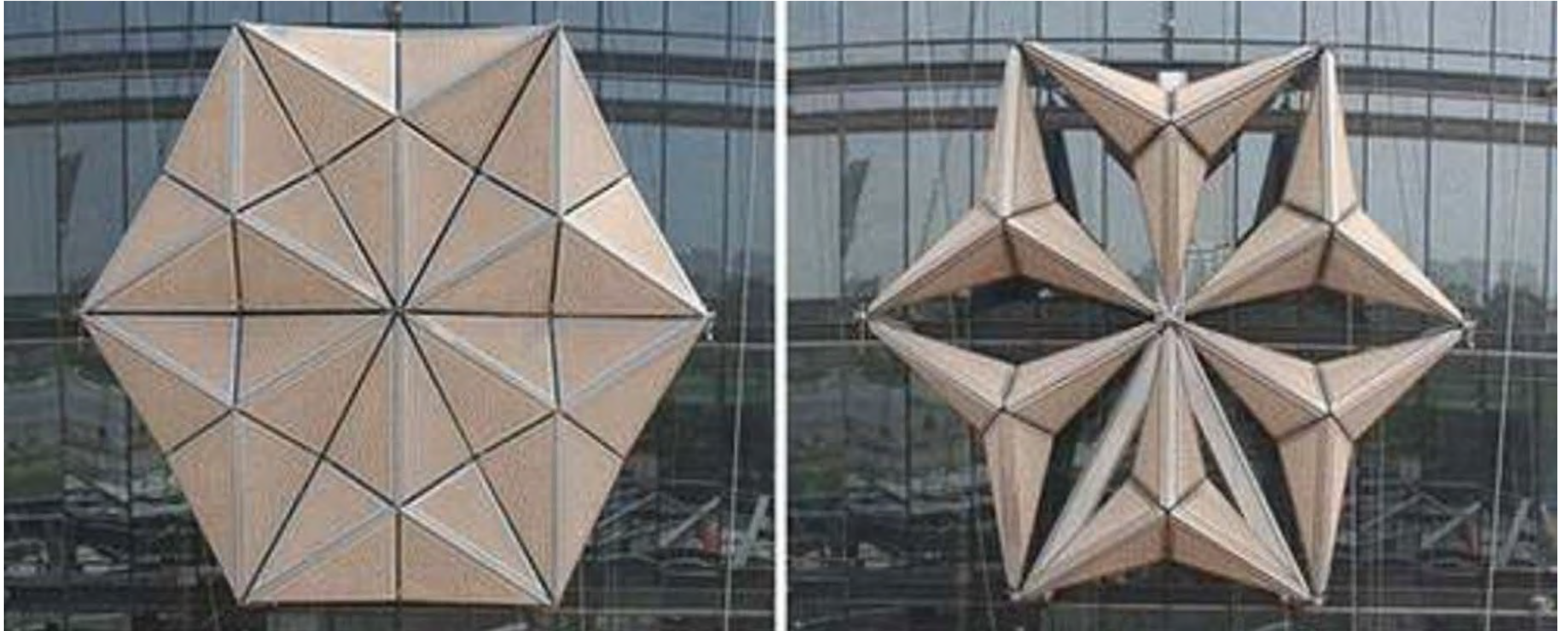
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Quelle: [ArchiExpo](#)

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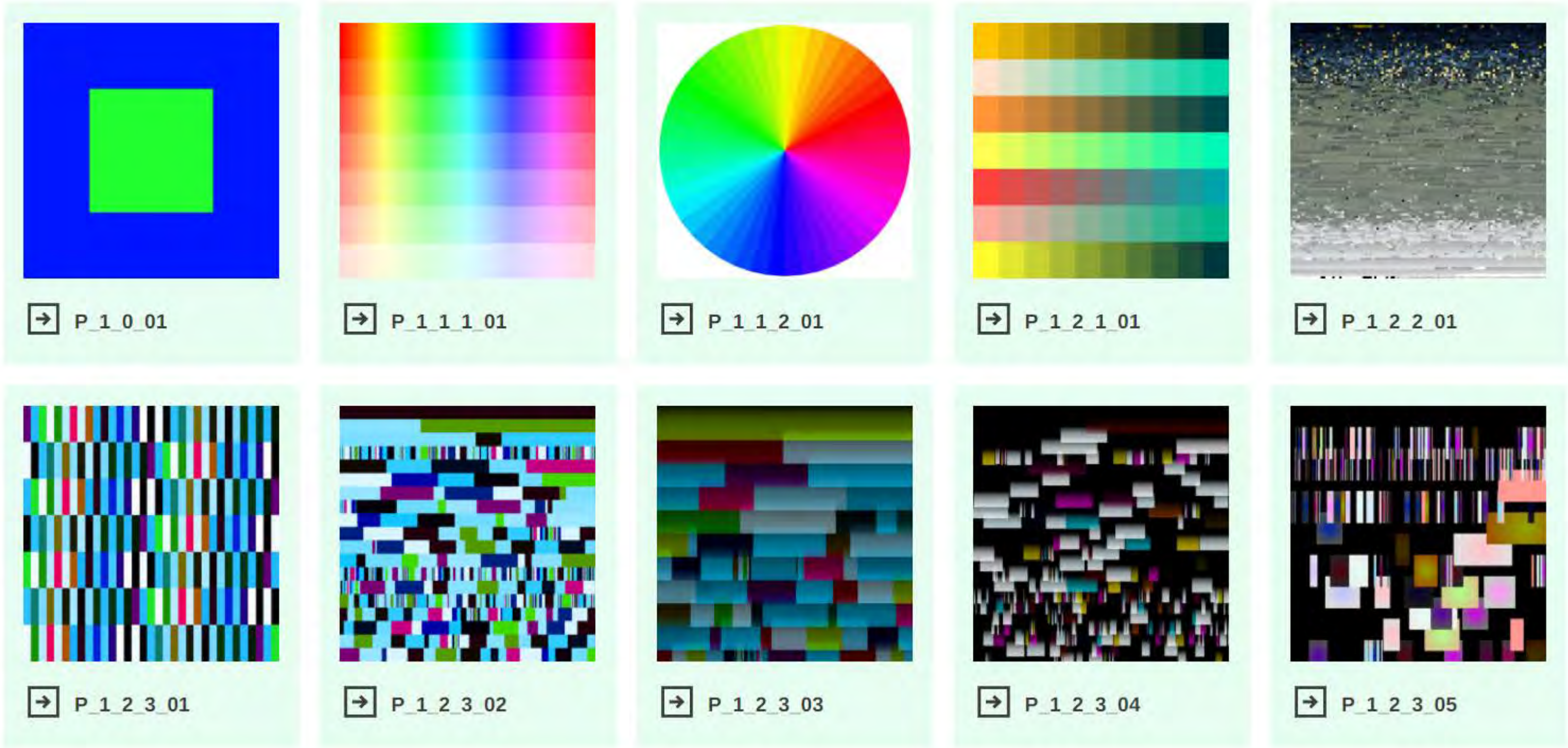
Quelle: [CityOfSound](#)

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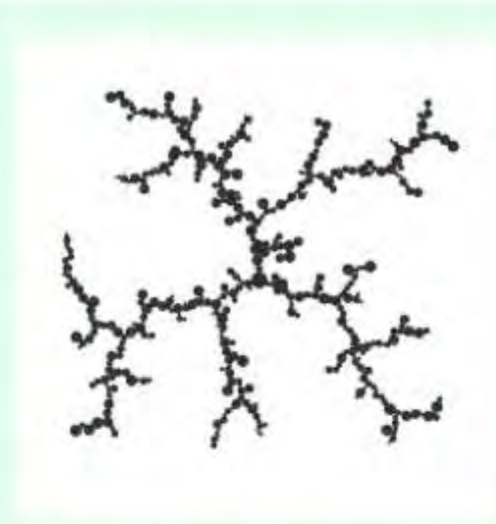
Quelle: [SlideShare](#)

Applied Parametric Design



Quelle: [Generative Gestaltung](#)

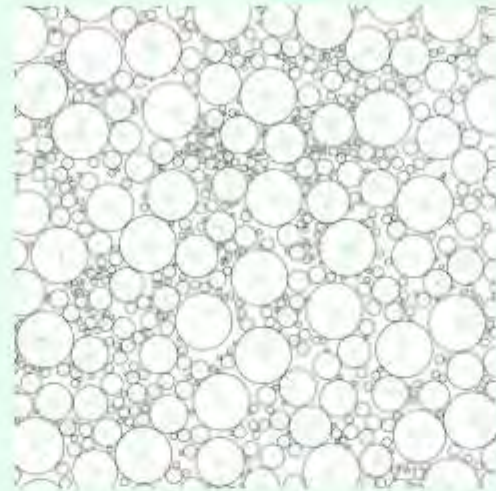
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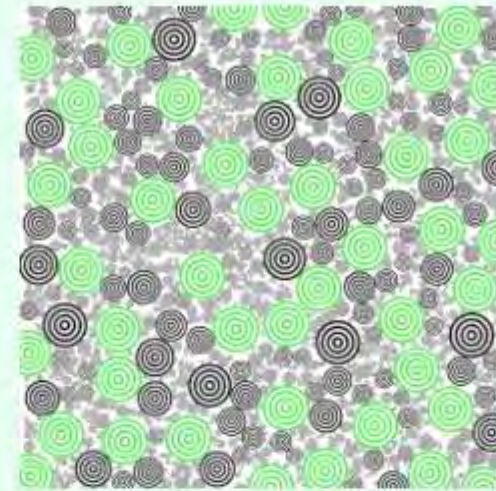
→ P_2_2_4_01



→ P_2_2_4_02



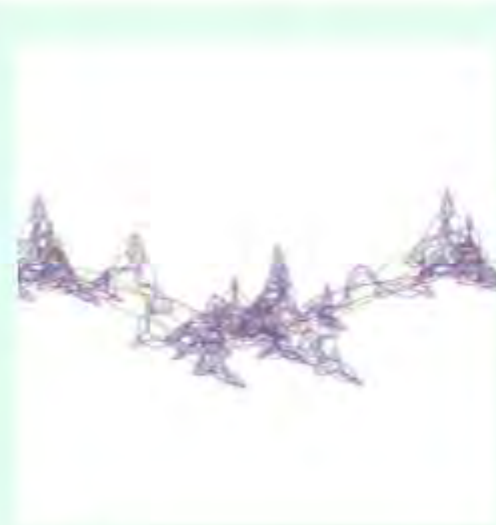
→ P_2_2_5_01



→ P_2_2_5_02



→ P_2_2_6_01



→ P_2_2_6_02



→ P_2_2_6_03



→ P_2_2_6_04

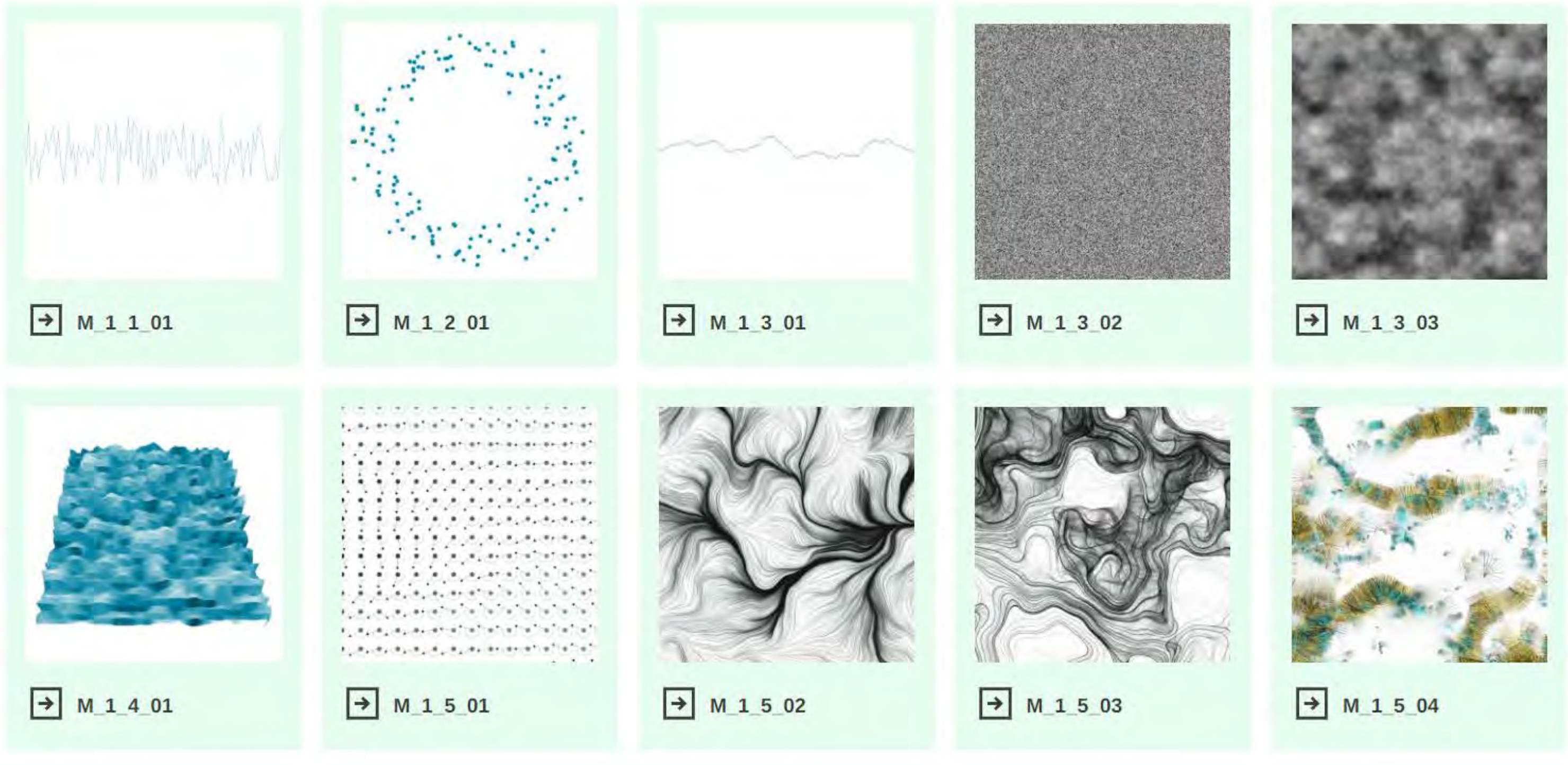


→ P_2_2_6_05



→ P_2_3_1_01

Applied Parametric Design

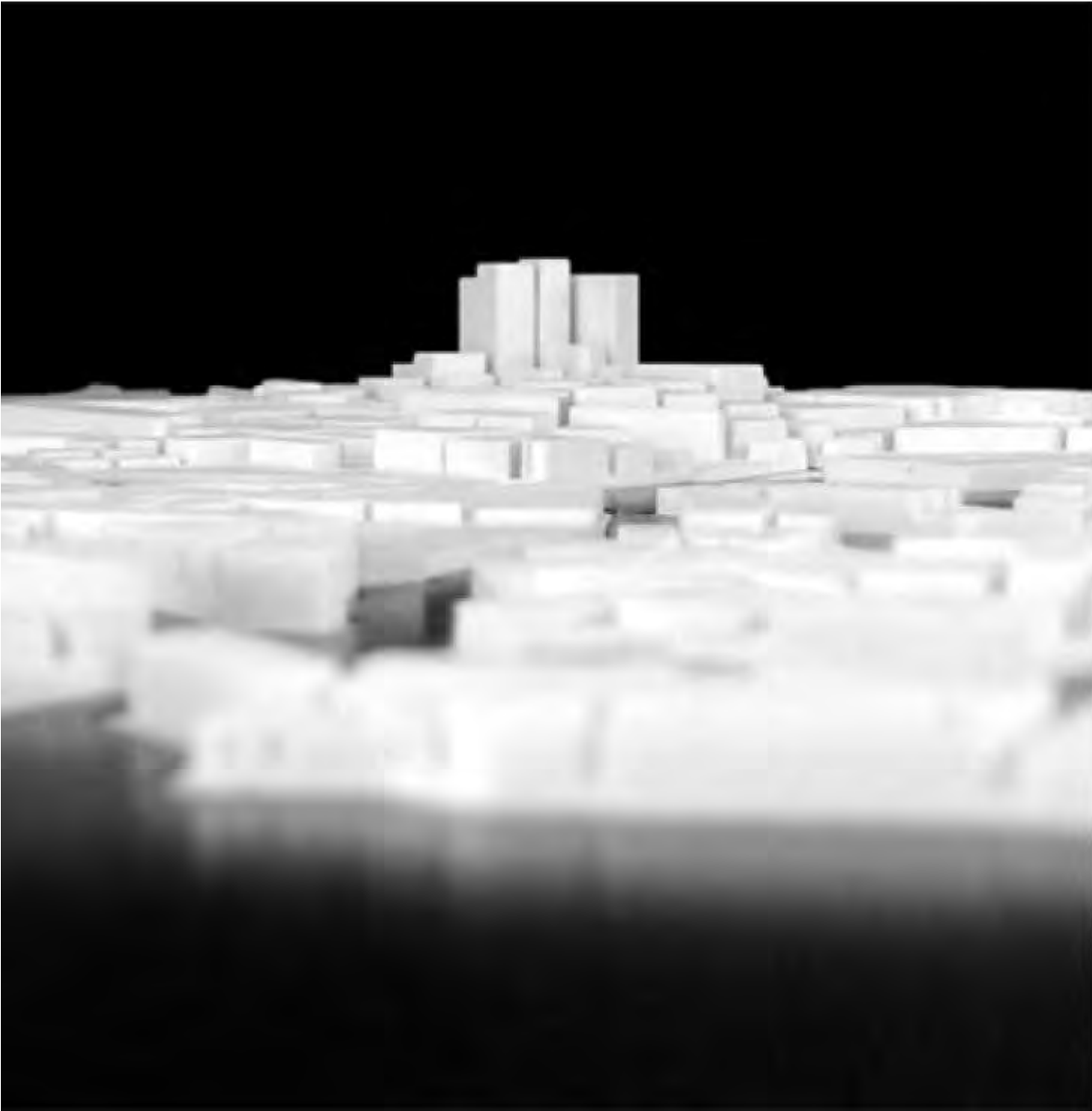


Quelle: [Generative Gestaltung](#)

Applied Parametric Design



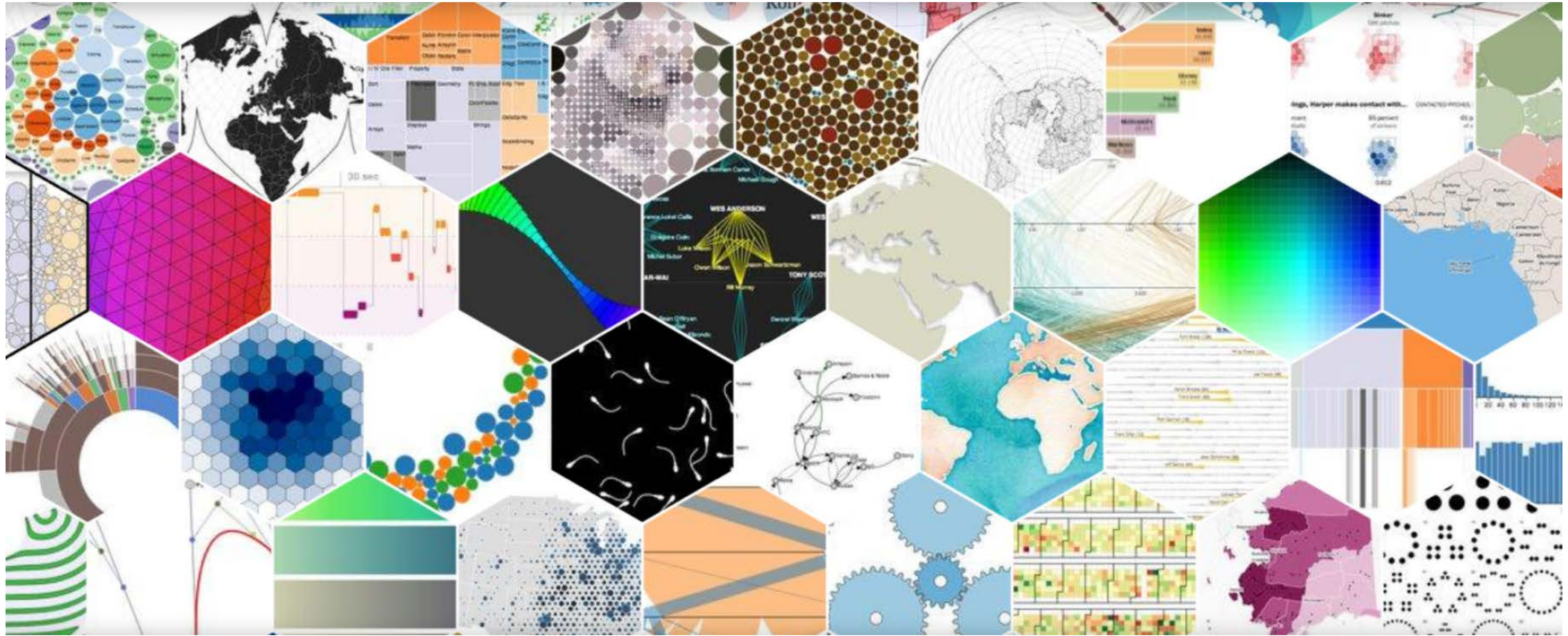
Applied Parametric Design



Quelle: VISLAB

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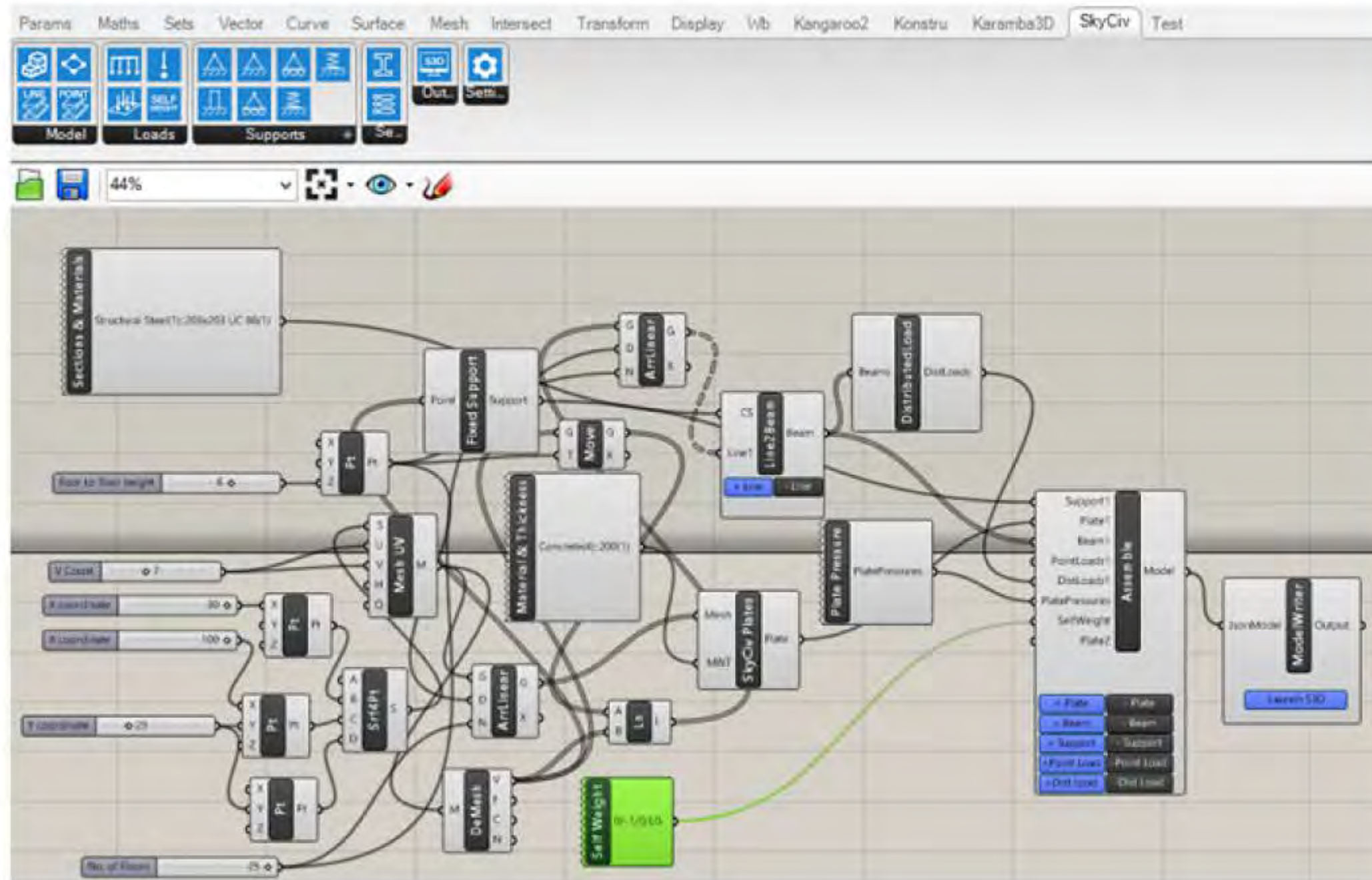
Ausblick



Quelle: *D3js*

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Ausblick



Quelle: [Rhino3D Blog](#)

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@seb_meier

