

2018

THE DESIGN OF EVERYDAY

APIS

Design APIs like
everyday things

ARNAUD LAURET

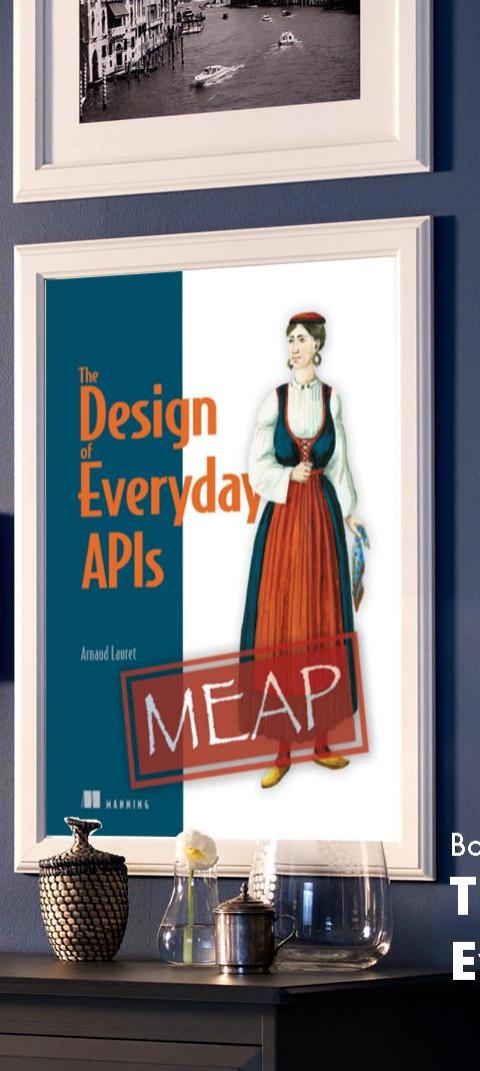
@APIHANDYMAN



Blog

apihandyman.io

Arnaud Lauret
[@apihandyman](https://twitter.com/apihandyman)



Book

**The Design Of
Everyday APIs**

Styleguides collection

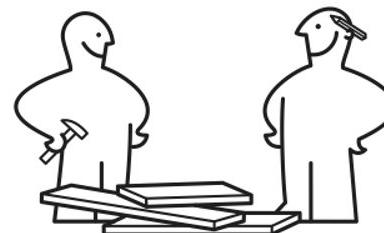
apistylebook.com



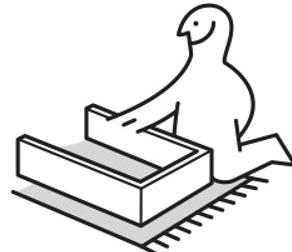
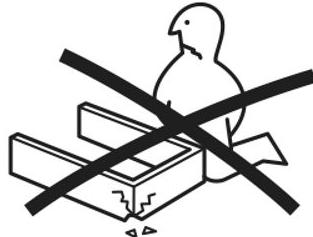
ÄPI DEJSIGN



1. PURPOSE



2.USABILITY



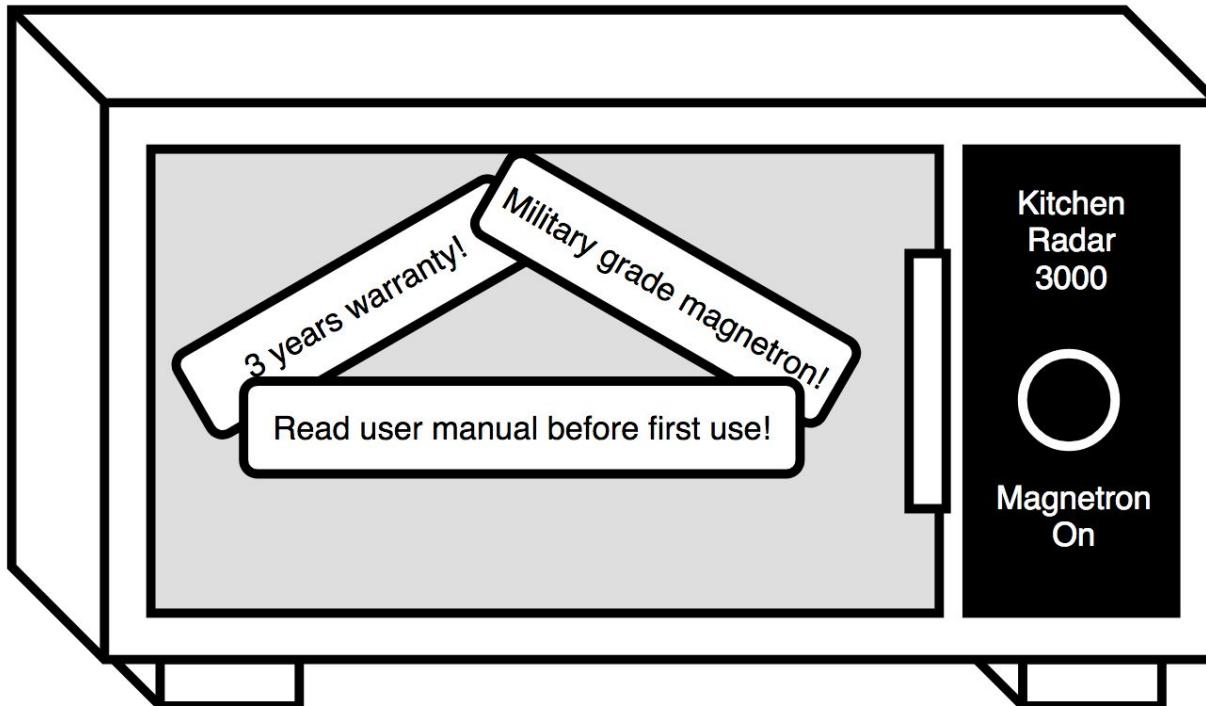
3.CONSTRAINTS

1.

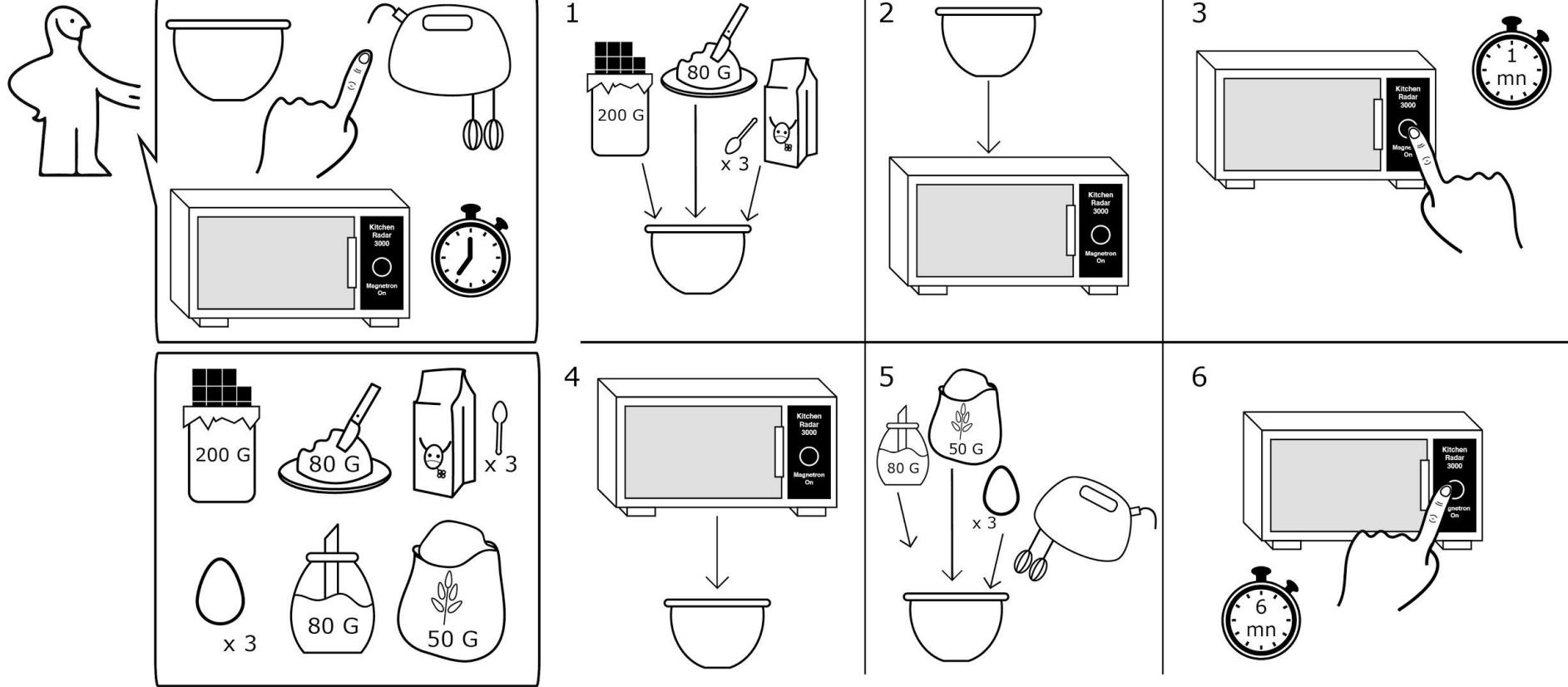
WHAT IS AN API'S PURPOSE?



KITCHEN RADAR 3000



CHÖKLATE KÄKE

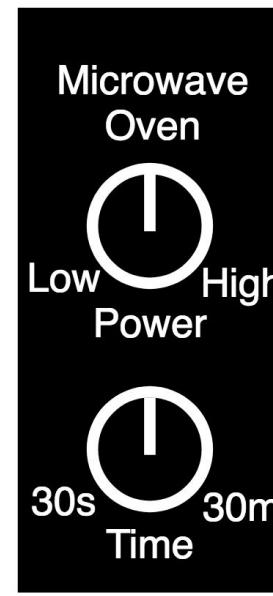
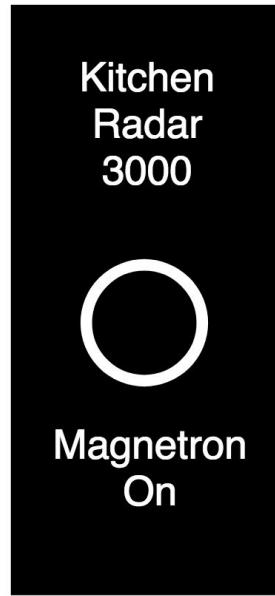


DEFRÖST

Heating power Cheat sheet	
Full	Hold
Medium	7s
Low	11s
Defrost	13s

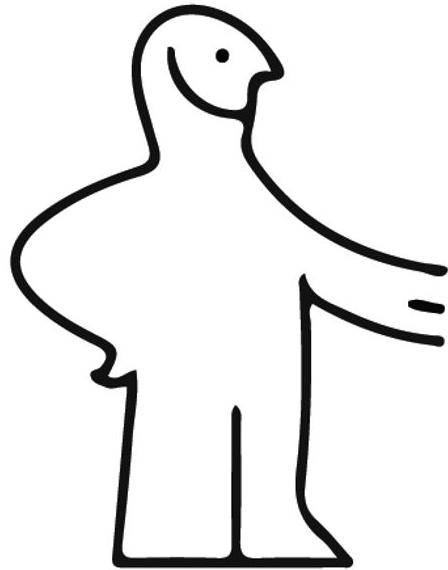


WRÖNG PURPOSE



TERRIBLE INTERFACE

API



INTERFACE FOR PEOPLE

WRÖNG PURPOSE

```
if <power> is high
    turn magnetron on
    wait for <duration>
    turn magnetron off
else
    if <power> is medium
        cycle = 7s
    else if <power> is low
        cycle = 11s
    else if <power> is thaw
        cycle = 13s
    end if
    for <duration>
        turn magnetron on
        wait for <cycle>
        turn magnetron off
        wait for <cycle>
    end for
end if
```

```
heat food at <power> for <duration>
```

TERRIBLE API

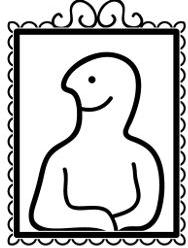
A photograph showing a person's hands drawing a detailed architectural floor plan of a house on a white sheet of paper. The person is wearing a gold bracelet on their left wrist. In the background, there are various office supplies like pens, a ruler, and color swatches.

2.

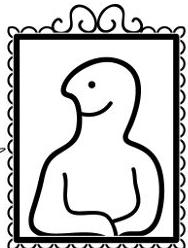
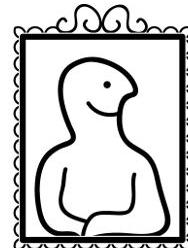
HOW TO DESIGN USABLE APIs?



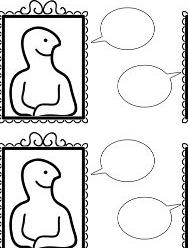
STRAIGHTFORWARD ÄPI



1. REPRESENTATIONS



2. INTERACTIONS



3. FLOWS

REPRESENTATIÖNS

Countdown: 43020

1536138951

Def
Moment

Def
Noi. Mmt

Increm.

Decrem.

WUM

REPRESENTATIÖNS

Countdown: 43020

1536138951

Def
Moment

Def
Noi. Mmt

Increm.

Decrem.

WUM

Alarm: 06:00

09:15

2018/09/05

Set
Time

Set
Alarm

+

-

24h Alarm Clock

REPRESENTATIÖNS

GET ~~/wum~~

GET /alarm-clock

NAMES

REPRESENTATIÖNS

1536138951

2018-05-09T09:15:51

DATA FORMATS

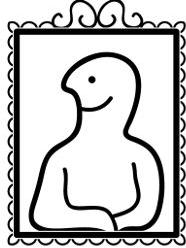
REPRESENTATIÖNS

“~~countdown~~”: 43020

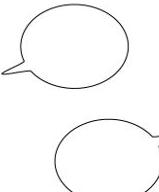
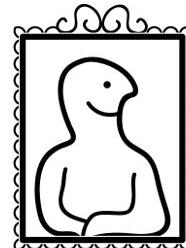
“alarm”: “08:00”

DATA

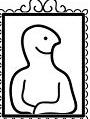
STRAIGHTFORWARD ÄPI



1. REPRESENTATIONS

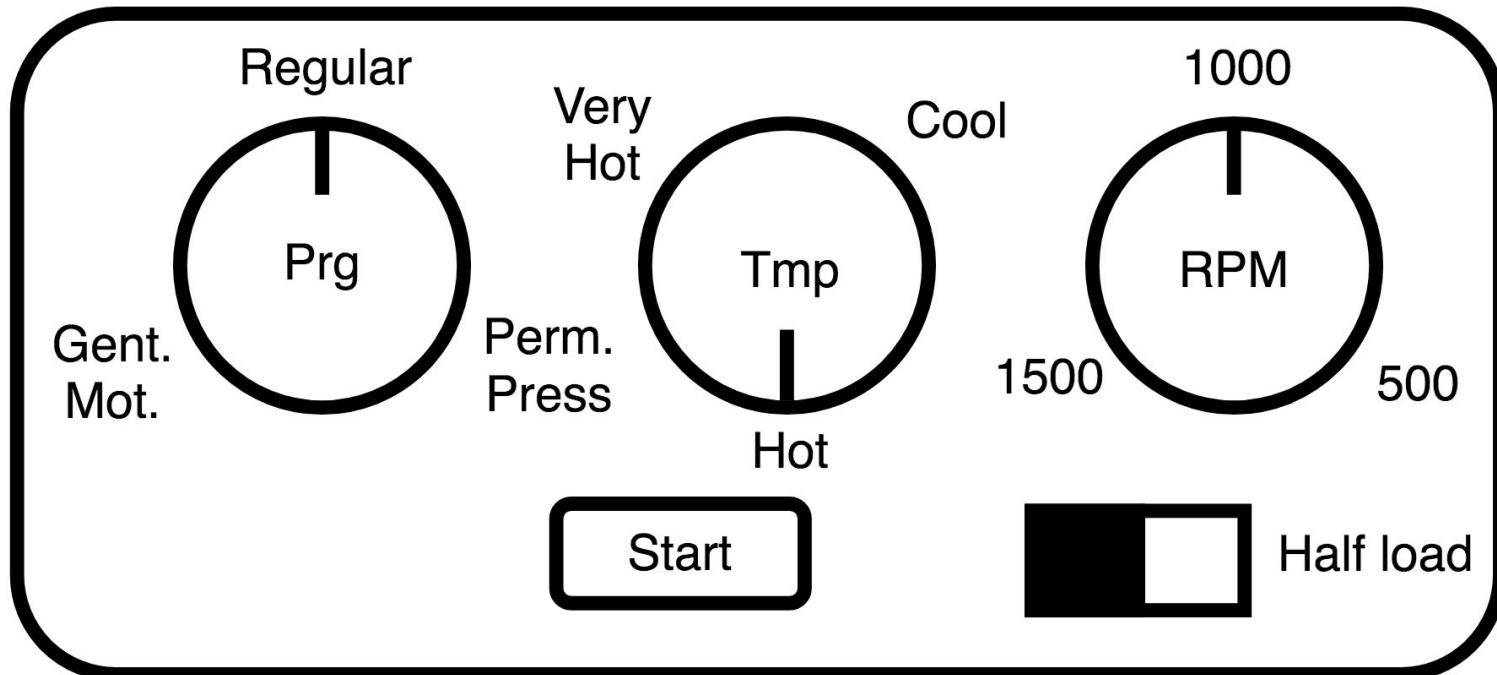


2. INTERACTIONS



3. FLOWS

INTERACTIÖNS

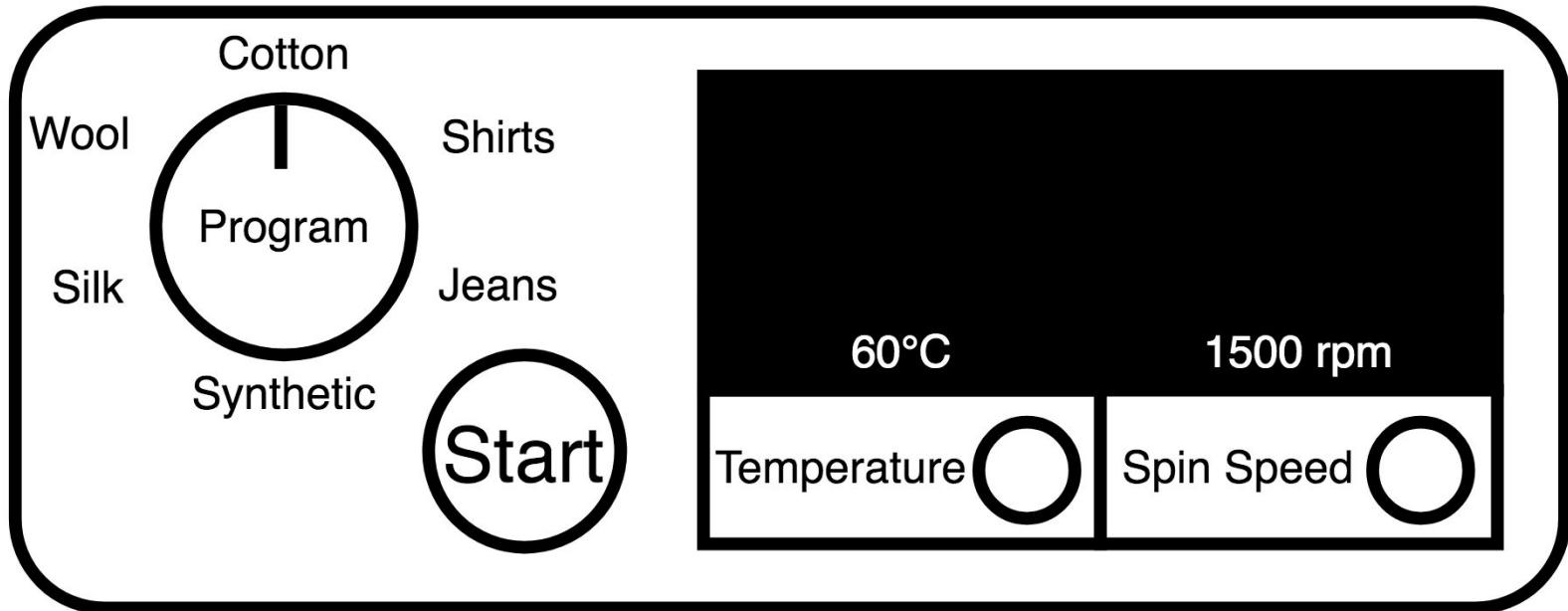


INTERAKTÖNS

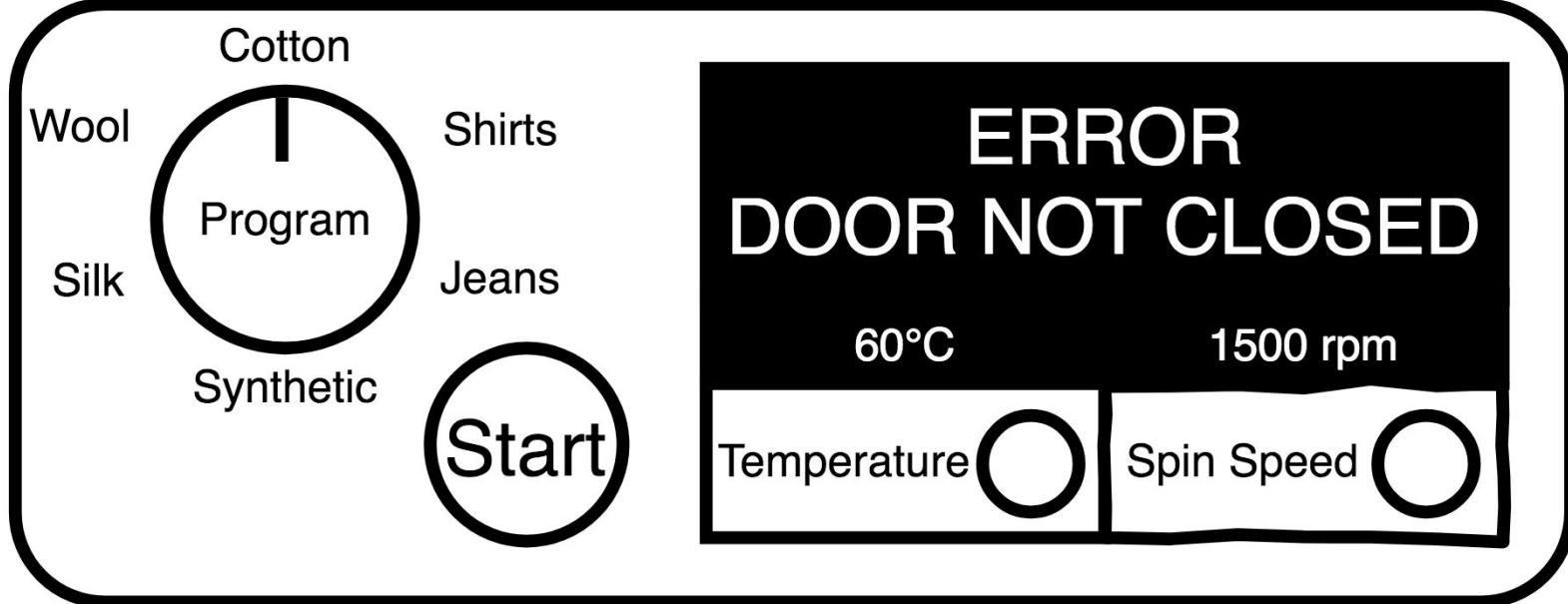


WHYYYY

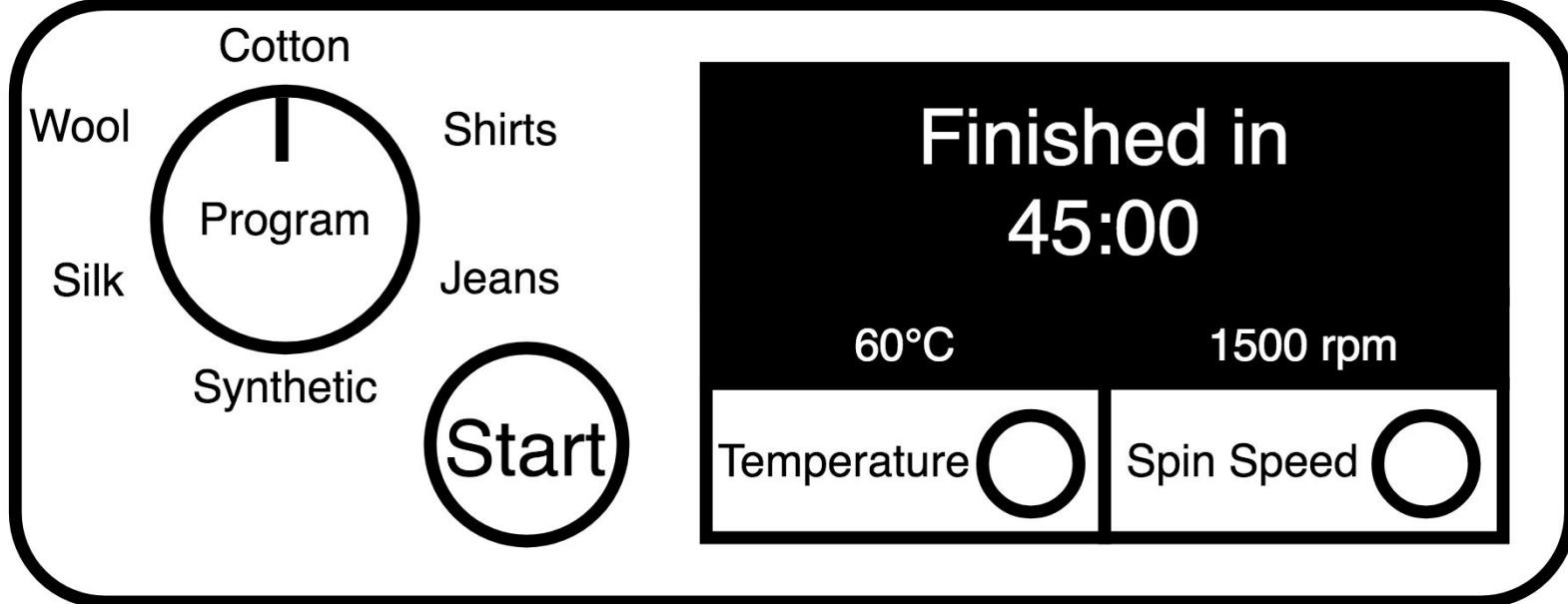
INTERACTÖNS



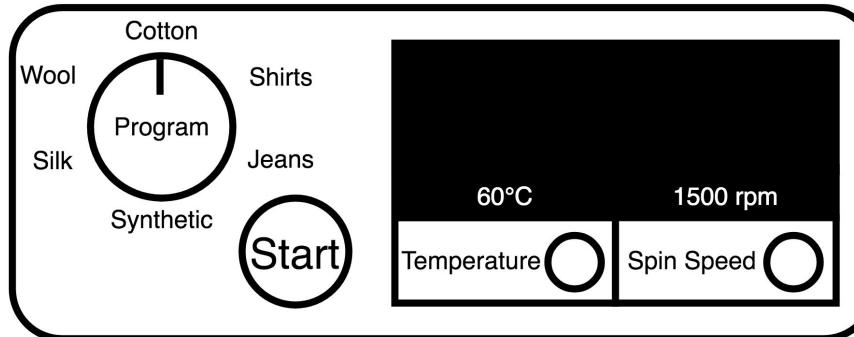
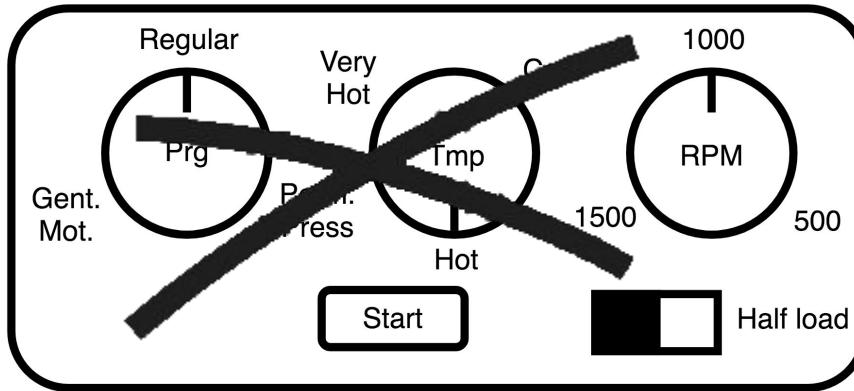
INTERACTÖNS



INTERACTÖNS



INTERACTIÖNS



INTERACTIÖNS

```
{ "prg": "regular",  
  "temp": "cool",  
  "rpm": 1000  
  "hl": true}
```

```
{ "program": "cotton"}
```

INPUTS

INTERACTIÖNS

400 ~~BAD REQUEST~~

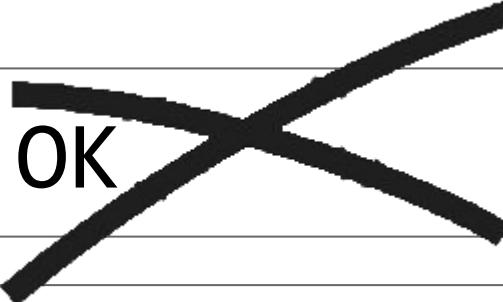
400 BAD REQUEST

{“message”:”door not closed”}

ERROR FEEDBACK

INTERACTIÖNS

200 OK

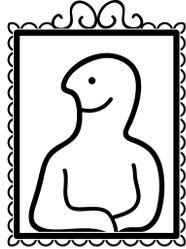


202 ACCEPTED

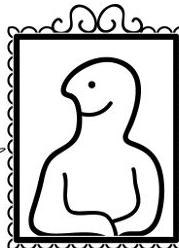
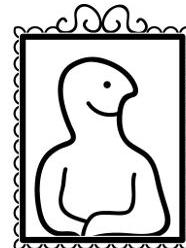
{"finishedIn": "00:45:00"}

SUCCESS FEEDBACK

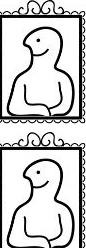
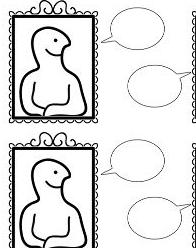
STRAIGHTFORWARD ÄPI



1. REPRESENTATIONS



2. INTERACTIONS

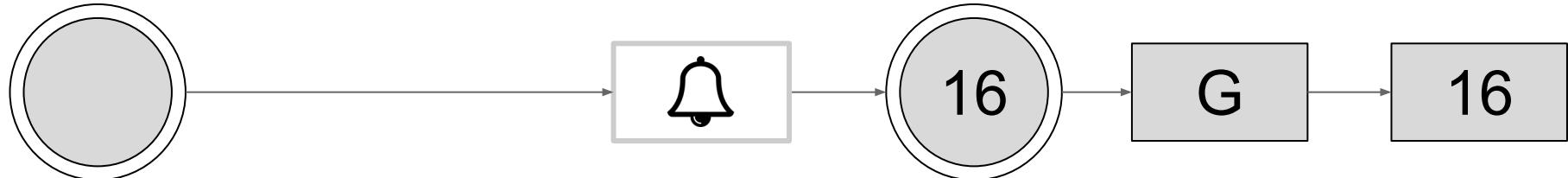


3. FLOWS

FLows

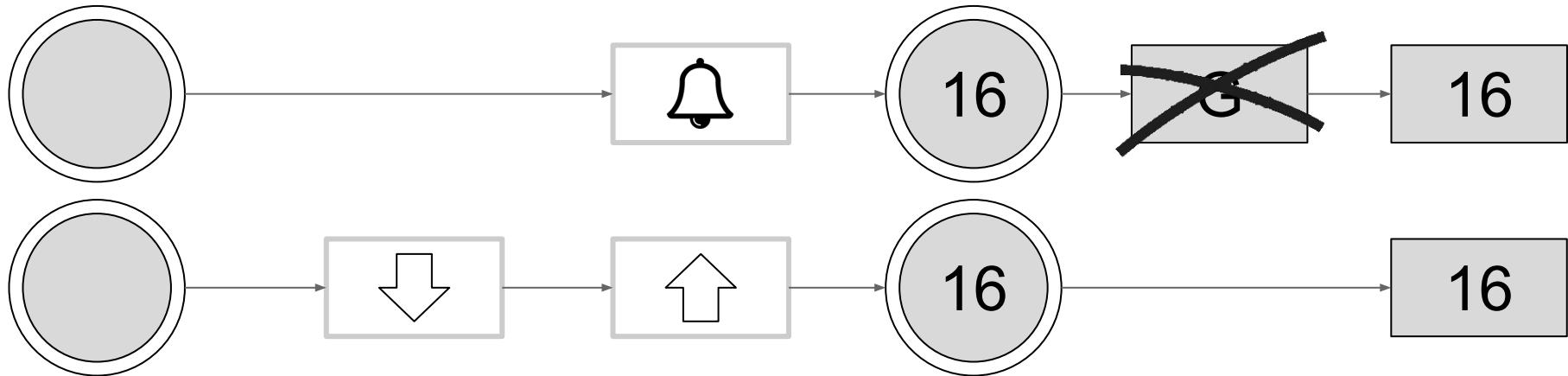


FLows

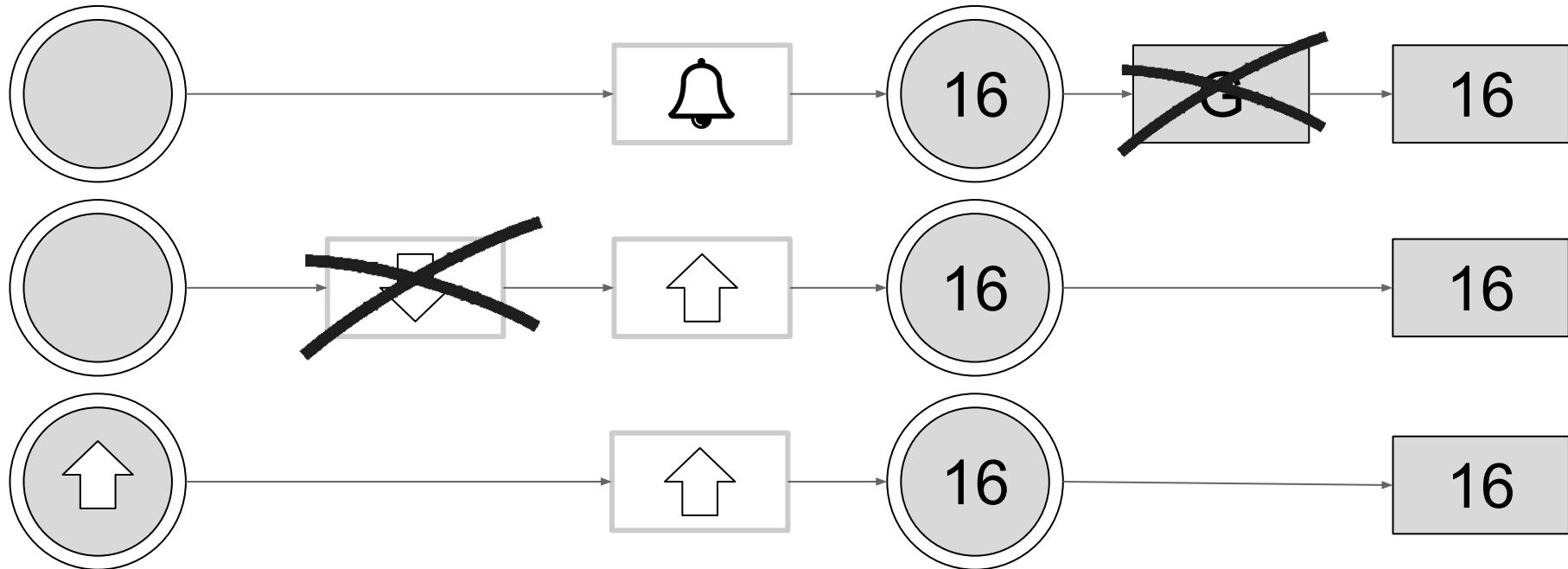




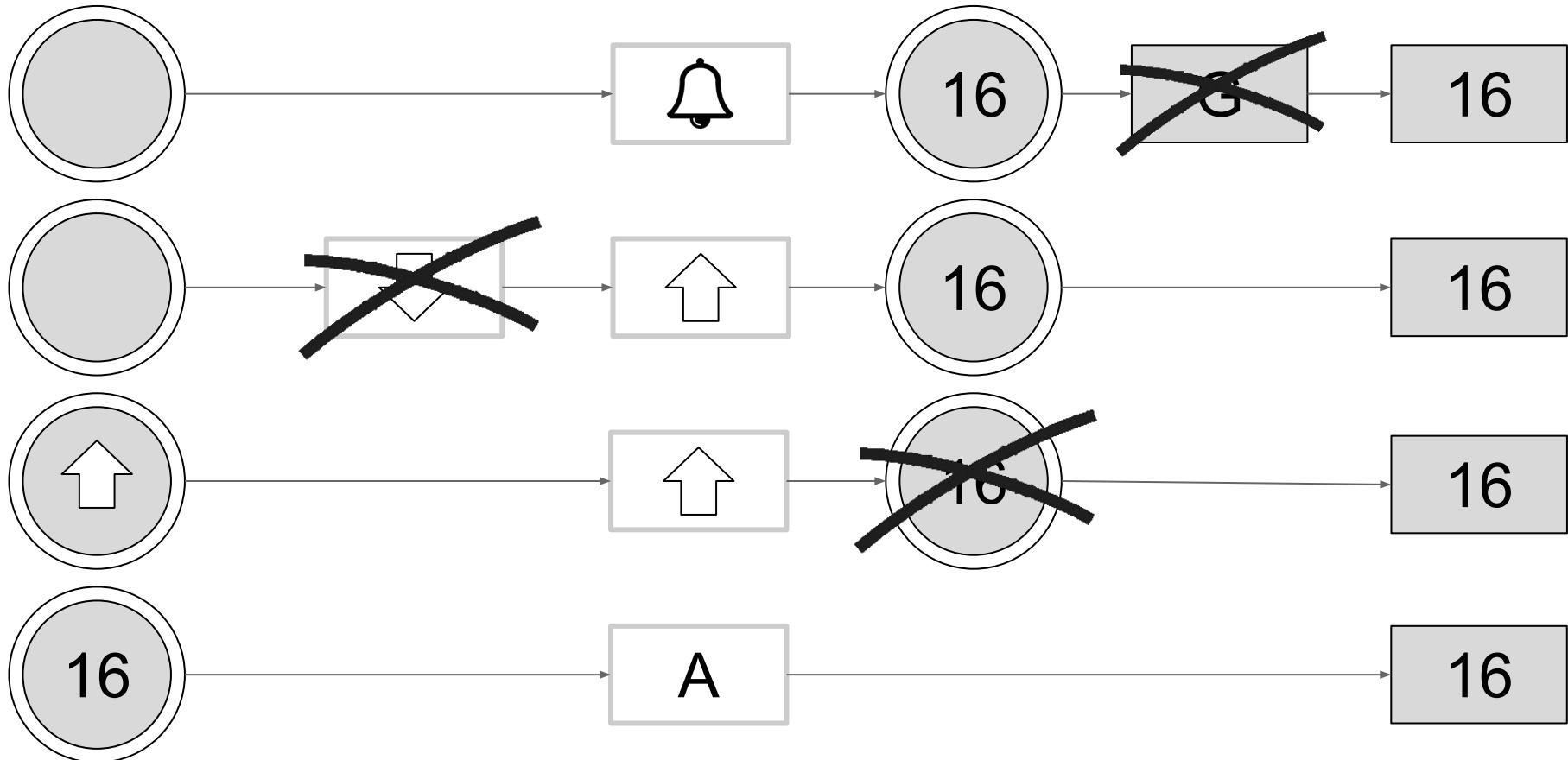
FLows



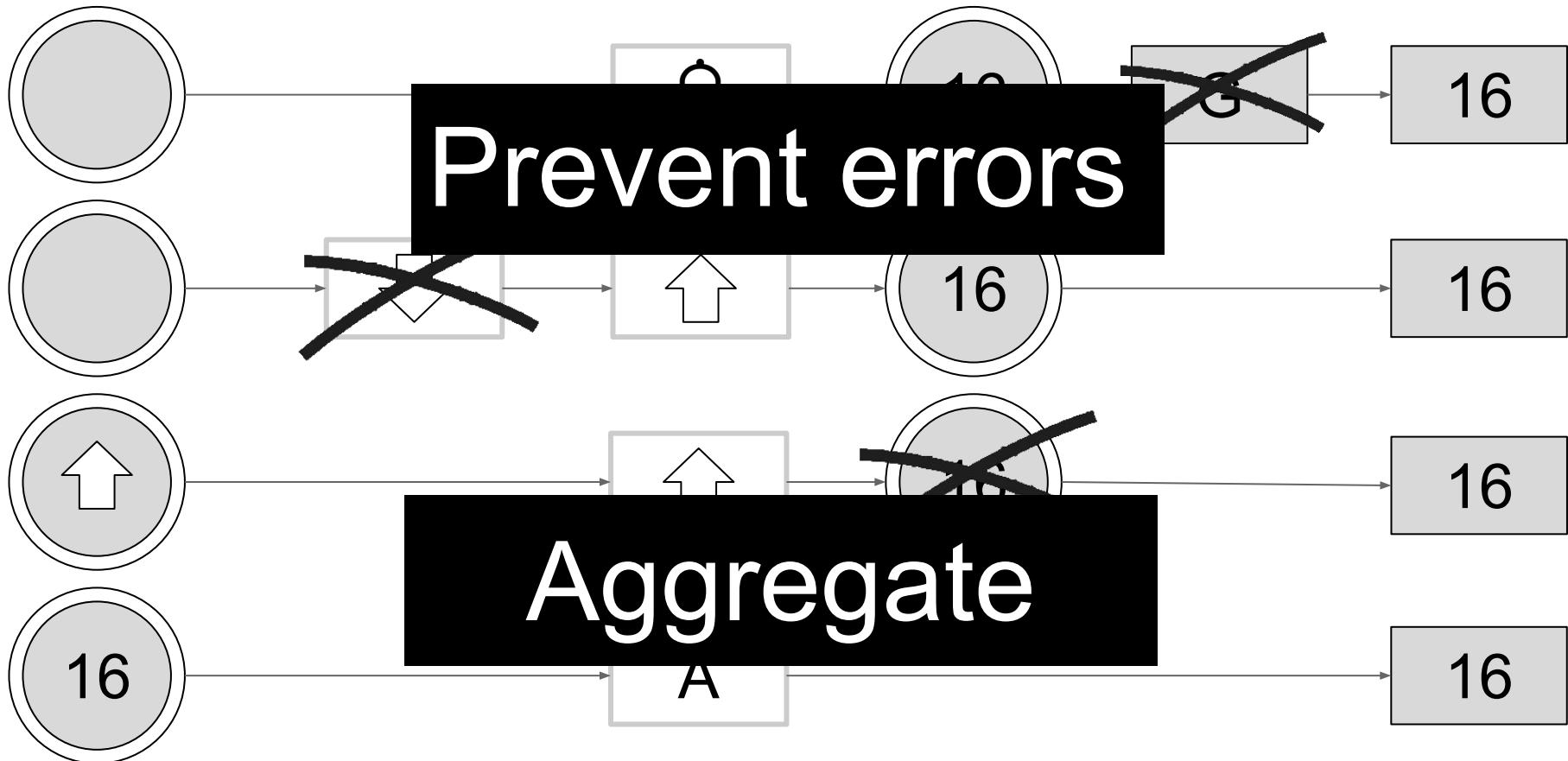
FLows



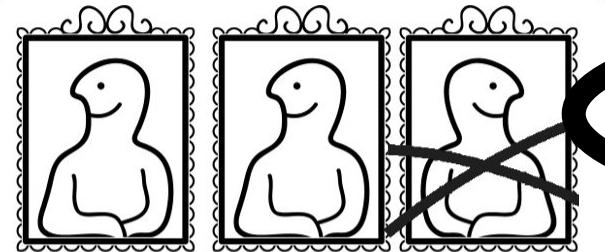
FLows



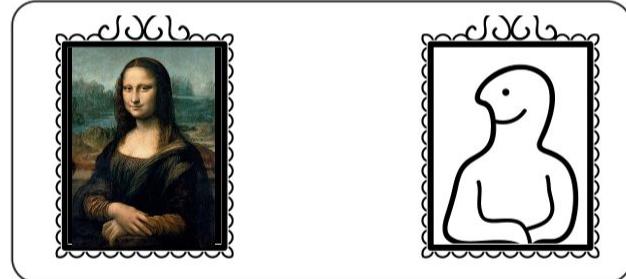
FLows



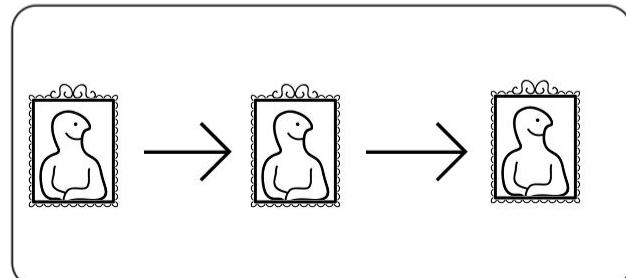
PREDICTABLE ÄPI



1. CONSISTENT

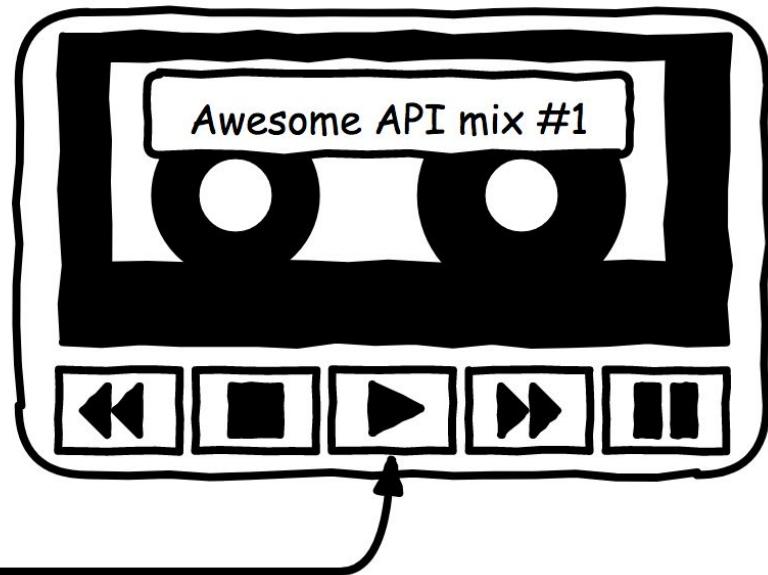
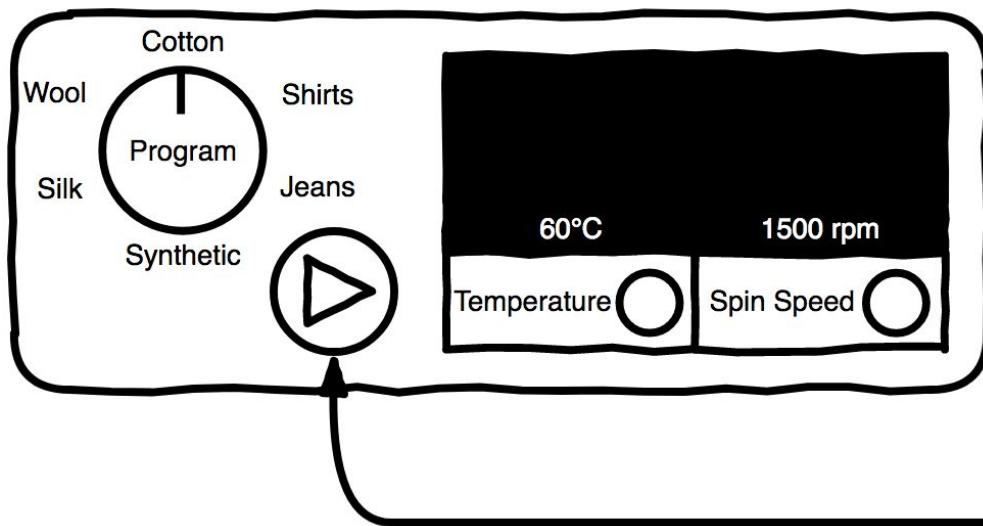


2. ADAPTABLE



3. DISCOVERABLE

CONSISTENT DESIGN



CONSISTENT DESIGN

SELF-CONSISTENT

CONSISTENT DESIGN

SELF-CONSISTENT

CONSISTENT ACROSS ORGANIZATION

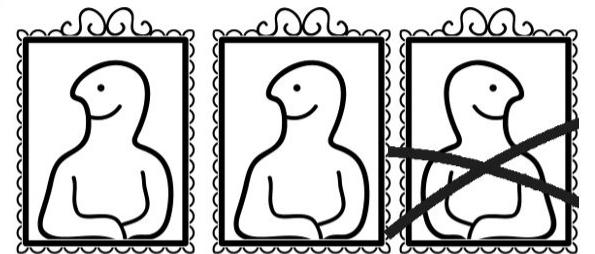
CONSISTENT DESIGN

SELF-CONSISTENT

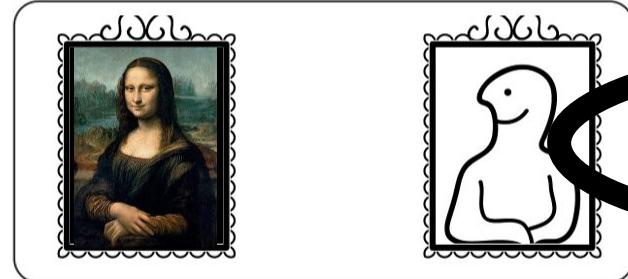
CONSISTENT ACROSS ORGANIZATION

COMMON PRACTICES & STANDARDS

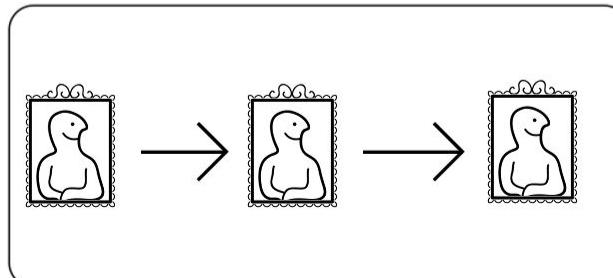
PREDICTABLE ÄPI



1.CONSISTENT



2.ADAPTABLE



3.DISCOVERABLE

ADAPTABLE DESIGN



ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

CONTENT NEGOTIATION

ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

CONTENT NEGOCIATION

INTERNATIONALIZATION

ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

CONTENT NEGOCIATION

INTERNATIONALIZATION

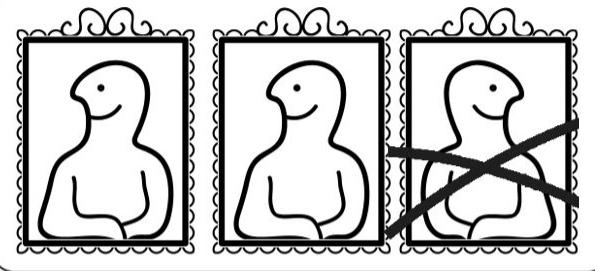
DATA SELECTION

TOO MUCH ADAPTABLE

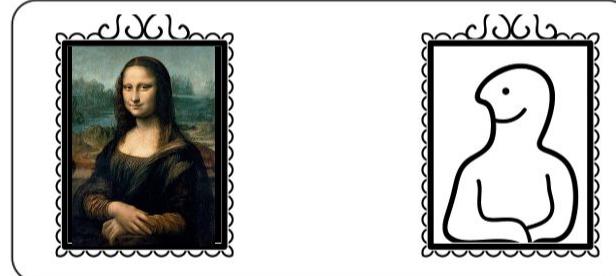
A close-up photograph of Donald Trump's face. He has a wide-open mouth, showing his teeth, and appears to be shouting or screaming. His eyes are squinted. He is wearing a dark suit jacket over a purple and white checkered shirt and a dark tie. The background is a solid blue.

WHYYYY

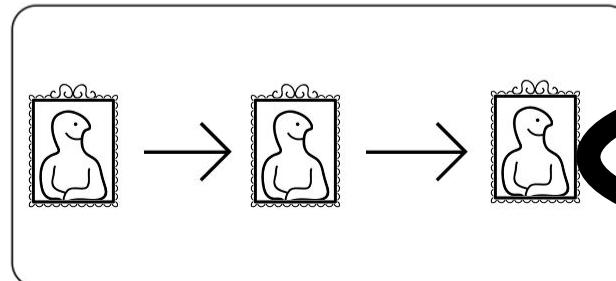
PREDICTABLE ÄPI



1. CONSISTENT

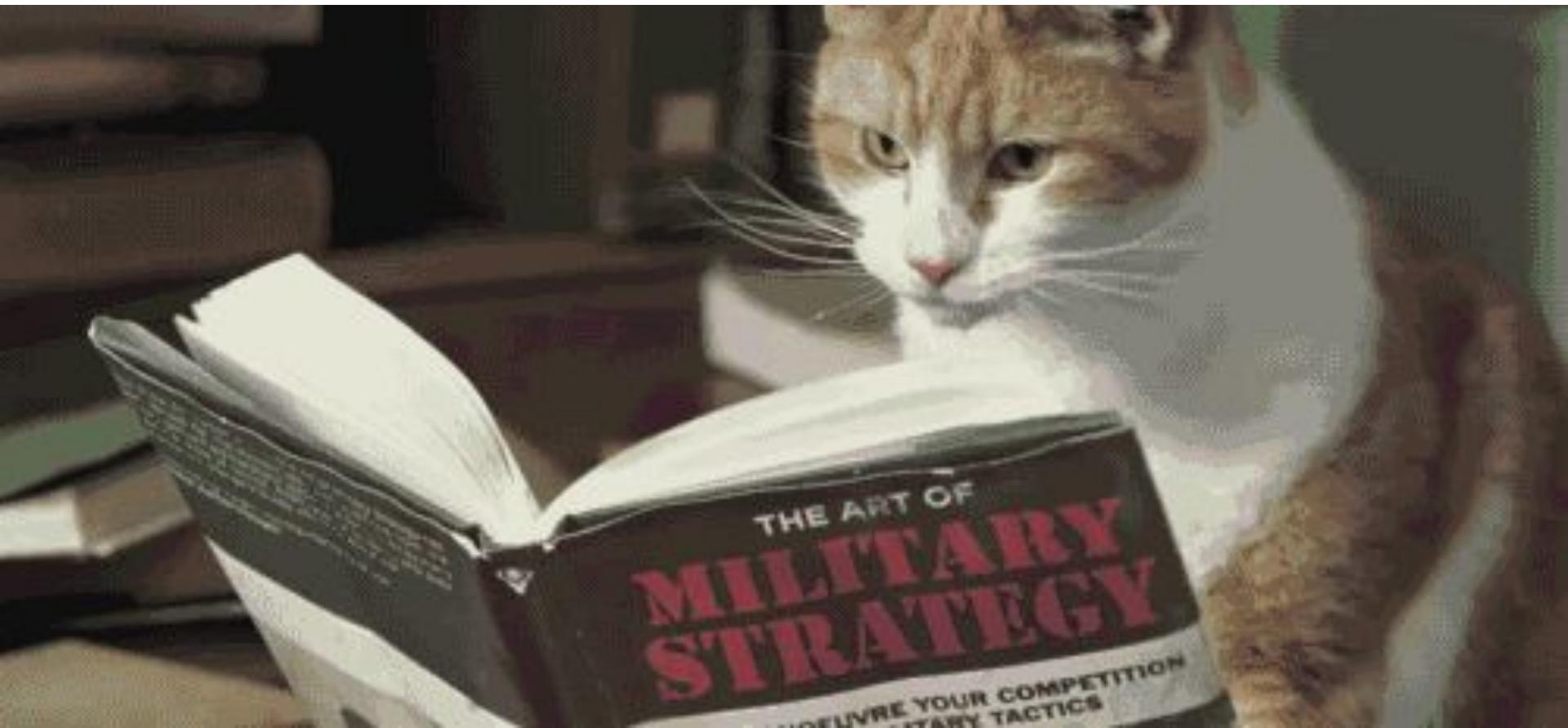


2. ADAPTABLE



3. DISCOVERABLE

DISCOVERABLE DESIGN



DISCOVERABLE DESIGN

```
“currentPage”: 2,  
“lastPage”: 10
```

METADATA

DISCOVERABLE DESIGN

```
{"_links": {  
    "self": "/books/123",  
    "authors": "/books/123/authors"  
}
```

HYPERMEDIA

DISCOVERABLE DESIGN

OPTIONS /BOOKS

200 OK

Allow: GET, POST

PROTOCOL

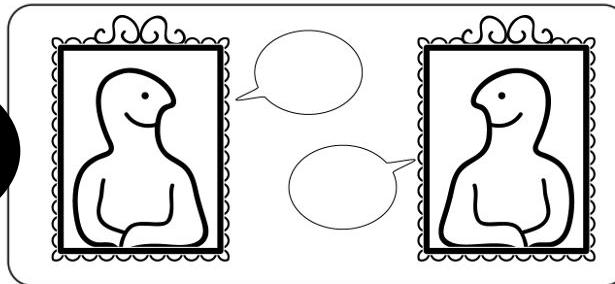
3.

CONSTRAINED API DESIGN



CONSTRAINED API DESIGN

1. USER



2. PROVIDER

USERS CONTEXT



USERS CONTEXT

LATENCY/GRANULARITY

USERS CONTEXT

LATENCY/GRANULARITY

FREQUENCY/WEBHOOKS, STREAMING

USERS CONTEXT

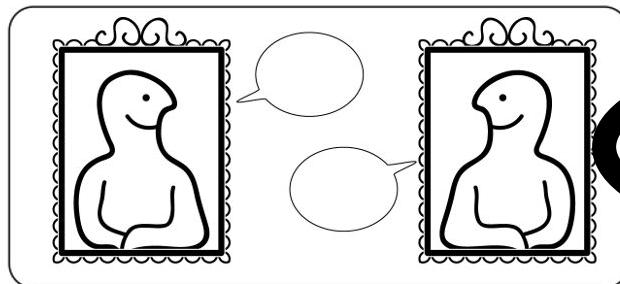
LATENCY/GRANULARITY

FREQUENCY/WEBHOOKS, STREAMING

VOLUME/BATCH, BULK

CONSTRAINED API DESIGN

1.USER



2.PROVIDER

PROVIDER'S CONTEXT



PROVIDER'S CONTEXT

SCALABILITY/RATE LIMITING

PROVIDER'S CONTEXT

SCALABILITY/RATE LIMITING

PERFORMANCE/ASYNCHRONOUS

PROVIDER'S CONTEXT

SCALABILITY/RATE LIMITING

PERFORMANCE/ASYNCHRONOUS

NOT 24-7/NO GO

PROVIDER'S CONTEXT





TAKEAWAYS

2018

THE DESIGN OF EVERYDAY

APIS EMPATHY CONTEXT

ARNAUD LAURET

@APIHANDYMAN