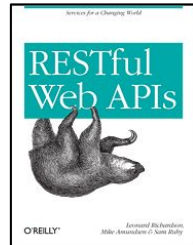


Creating

Mike Amundsen
@mamund

**Designing and Building
Great APIs**



Creating APIs

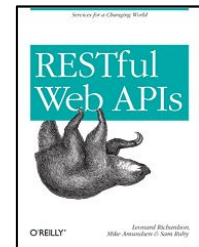
- Business Value of APIs
- Norman's Action Lifecycle



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The Business of APIs



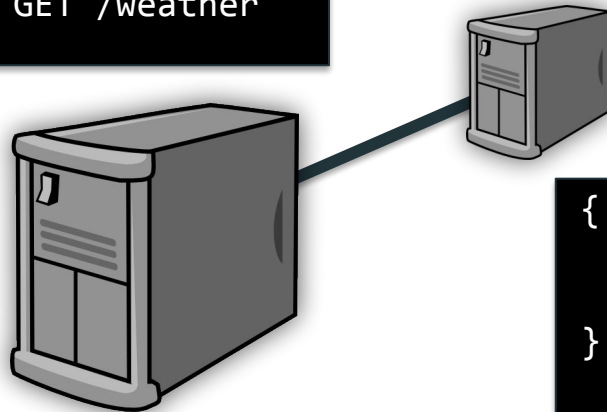
API

abbreviation

1. application programming interface



GET /weather



```
{  
  "city": "London",  
  "temp": 22  
}
```

APIs allow us to unlock hidden business value

- Create New Applications
- Identify New Revenue Streams
- Initiate New Businesses



A photograph of a forest floor with a path made of logs. The path is composed of several large, light-colored logs laid out in a winding pattern across the forest floor. The forest is dense with tall, thin trees, and the ground is covered in fallen leaves and low-lying green plants. The lighting is soft, suggesting a shaded forest environment.

good APIs make interaction easy

Typical Mobile App

Frontend
(client)

Backend
(server)



user input



temperature data (by location)

layout, graphics and text

Build page and send

Powered by APIs

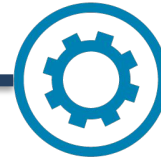
Frontend
(client)

Backend
(server)



user input

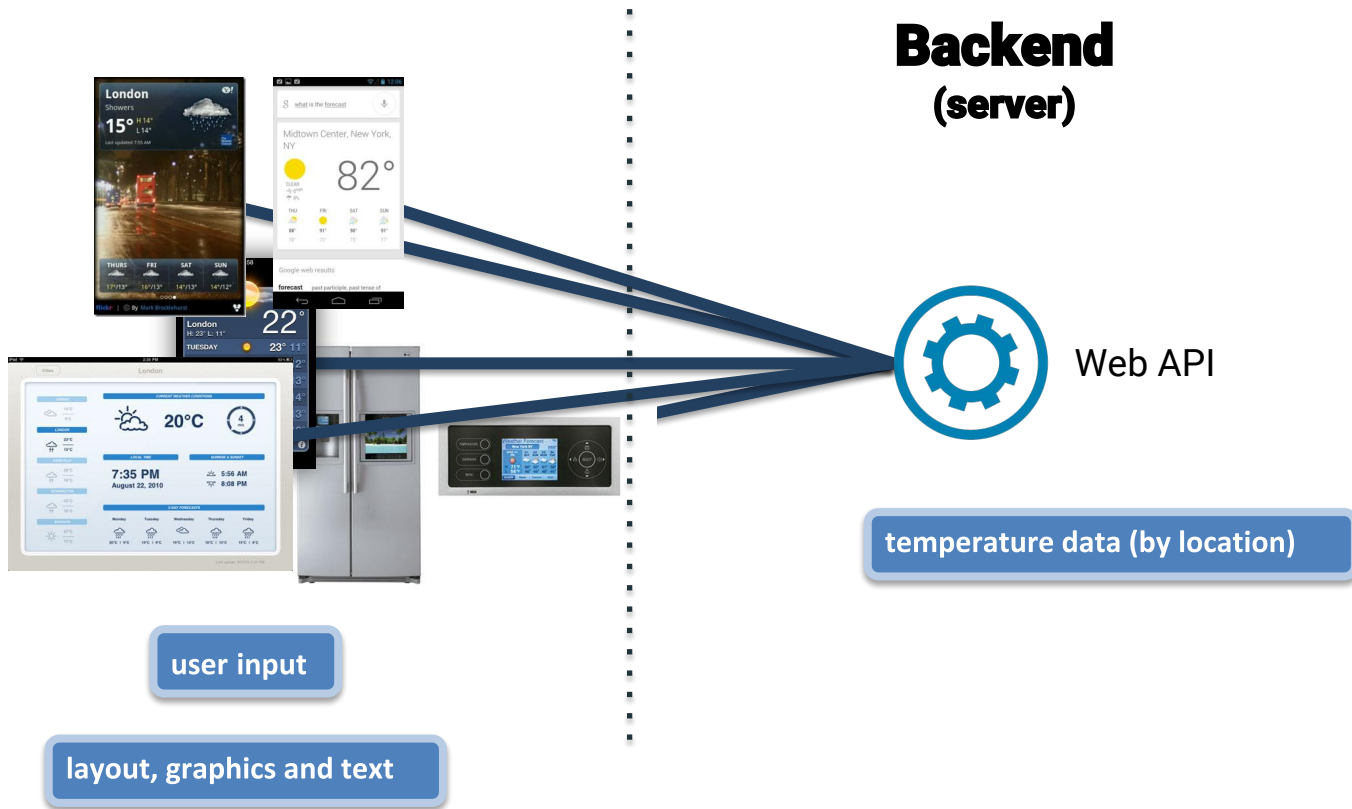
layout, graphics and text



Web API

temperature data (by location)

APIs enable Multi-channel Delivery



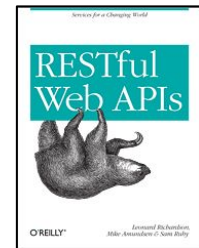
Norman's Action Lifecycle



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Donald Norman

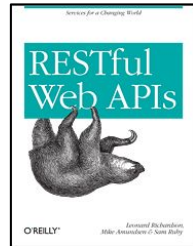
- Design of Everyday Things (19xx, 20xx)
- One of the founders of HCI Theory
- Universal approach to human-computer-interaction

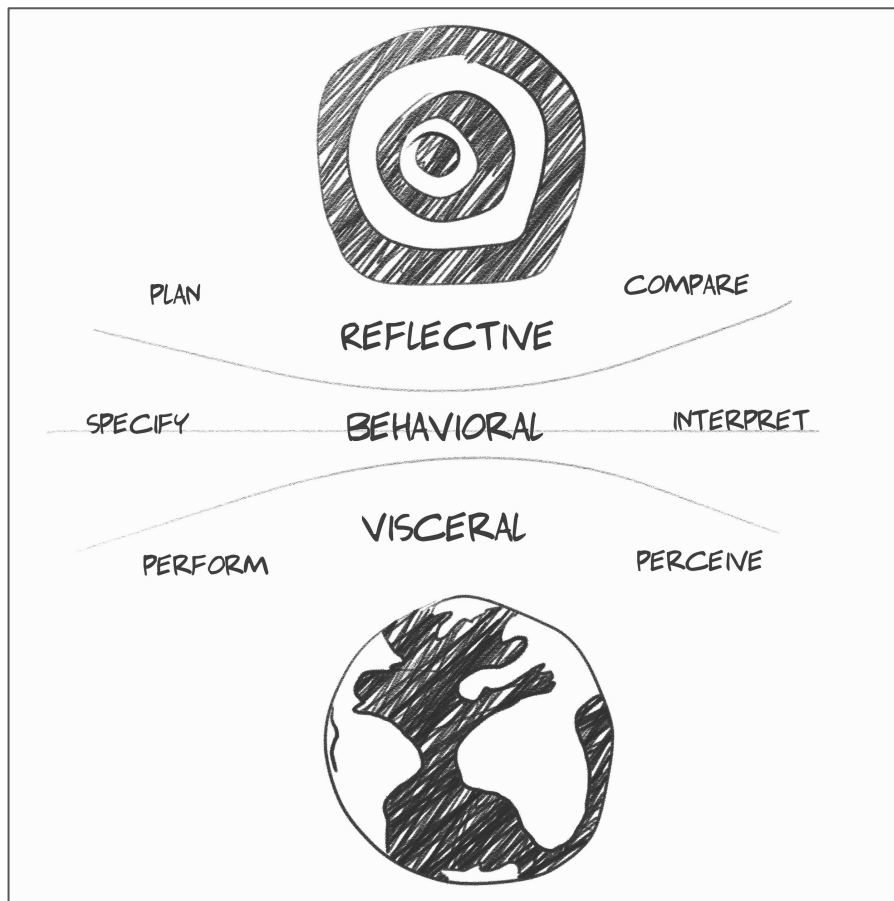


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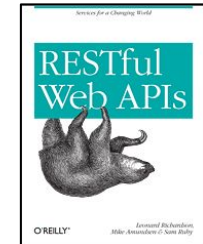
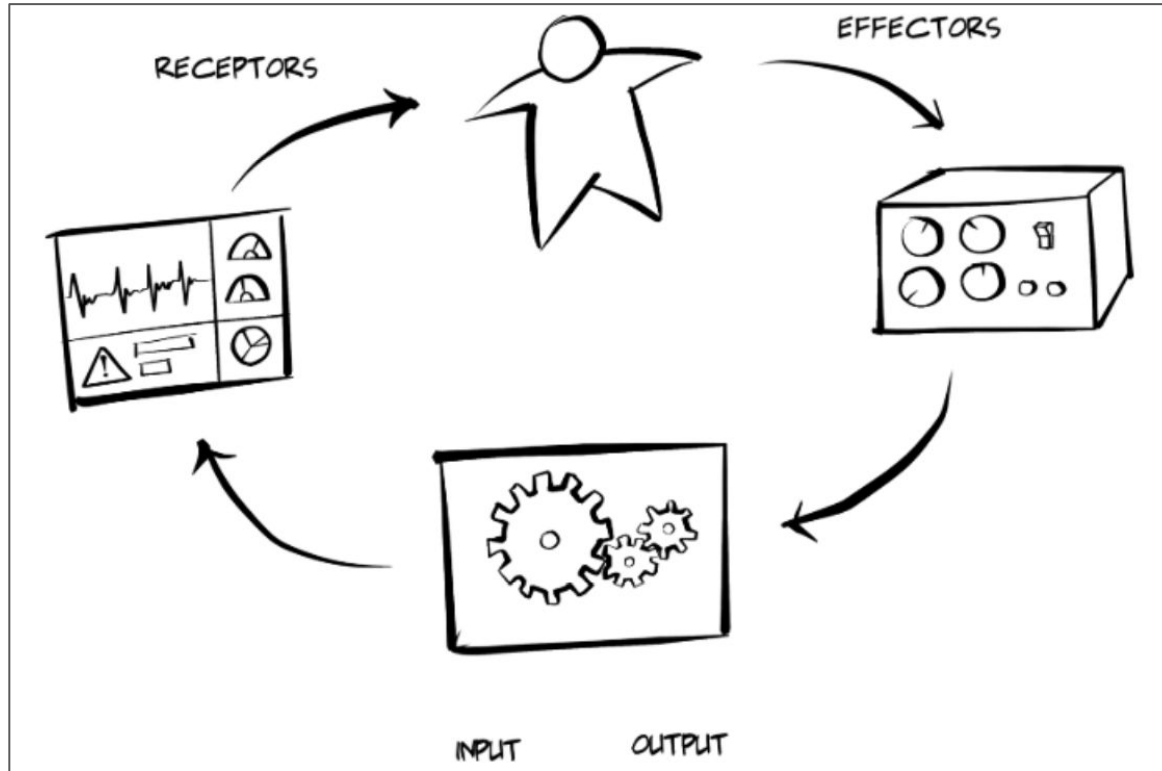
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Maldonado's Mechanisms



Verplank's Do, Feel, Know



The Action Lifecycle : Summary

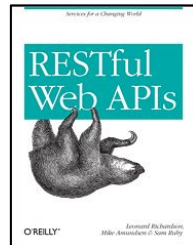
- You can generalize human/environmental interactions
- This model can be applied to HCI
- Is there a more specific model for API Clients?



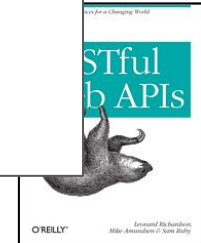
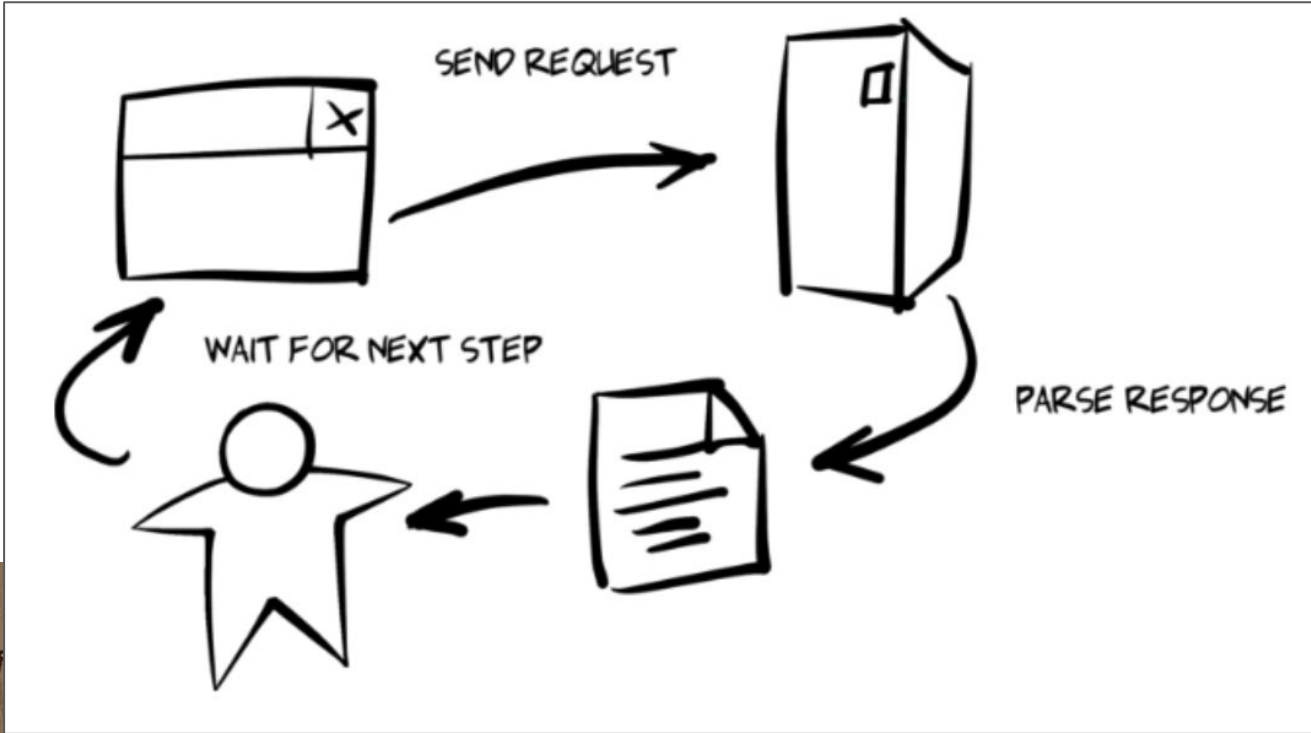
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Request, Parse, Wait (RPW) cycle



Path-following Pattern

START

COLLECT userProfile THEN

COLLECT productToBuy THEN

COLLECT shoppingCart THEN

COLLECT shippingInfo THEN

COLLECT paymentInfo THEN

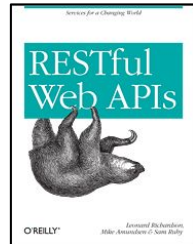
FINALIZE checkout

END



Explorer Pattern

```
WHILE NOT EXIT
  IF-NEEDED COLLECT userProfile OR
  IF-NEEDED COLLECT productToBuy OR
  IF-NEEDED COLLECT shoppingCart OR
  IF-NEEDED COLLECT shippingInfo OR
  IF-NEEDED COLLECT paymentInfo OR
  IF-ALLOWED FINALIZE checkout OR
  IF-REQUESTED EXIT
WHILE-END
```



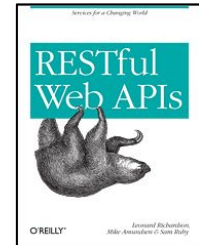
So...



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Summary

- APIs enable the business
- Adopt the Norman Lifecycle



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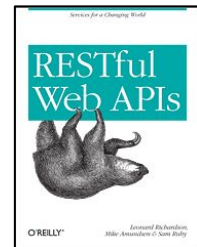
Exercise



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