

人工智能时代进阶的体验设计

# 让你的产品更智能、更个性化

高霖 微软 资深设计主管



# 北京

Beijing  
Born



A panoramic view of the Seattle skyline at sunset. The Space Needle is prominent on the left, and Mount Rainier is visible in the distance. The city lights are beginning to glow, and the sky is a mix of orange and blue.

# 西雅图


Seattle  
2014

Search the web Lin 334

**FACEBOOK (23)**

**Dean Hudson**  
This is Bat Country — with Mel Iler at Las Vegas.  
16 hours ago in Las Vegas, NV ·

**David Nelson**  
Pizza Time




Go Engaged

Justin Bieber

324 Comments

Leave a comment

Interesting timing. She sorta a Courtney kind of look. I've seen men try to replicate what/wh had before.  
Donald Seon, Seattle

I wish him success in this marriage. I truly believe he and Courtney have made it if he had stayed. I hope he will keep his clean cut type.  
Gavin, San Francisco

Finally! David Arquette & en Christina Mcintyre  
Savilla Simons, Argentina

If Courtney Cox is engaged certainly not doing a good job of hiding it!  
Dreya Johnson, Seattle

Just happened

Latest stories

Quickly catch up with the things just happened.

Yesterday



小娜好!

9:01

以下是您问的意大利草原餐厅的信息



**意大利农场餐厅**  
1006.3 公里  
北辰东路8号北辰时代生活广场81号, 北京市朝阳区

★★★★★ 204 个点评 ¥81

(206) 325-9100 开车 公交

查看网页结果

草原餐厅在哪

Jeremy Lin, Knicks Star, Save New York Again

Grammy Performances 2012: Adele, Rihanna And Chris Brown

Obama, Cameron stand in united front

News about Scarlett Johansson

Rihanna 2012 Grammy Performance

Scarlett Johansson's Girls' Night Out

News about Scarlett Johansson

Model Bar Refuelli, 28, who appeared on the cover of the Sports Illustrated Swimsuit Issue 2009, took the top... YAHOO!

Scarlett Johansson sells her home for \$9.5 million

Scarlett Johansson's Girls' Night Out in Los Angeles Times - 2 hours ago

Obama, Cameron stand in united front

Rihanna 2012 Grammy Performance

Scarlett Johansson Named to Maxim 'Hot 100' List

The Artist' Makes Statement at Oscars

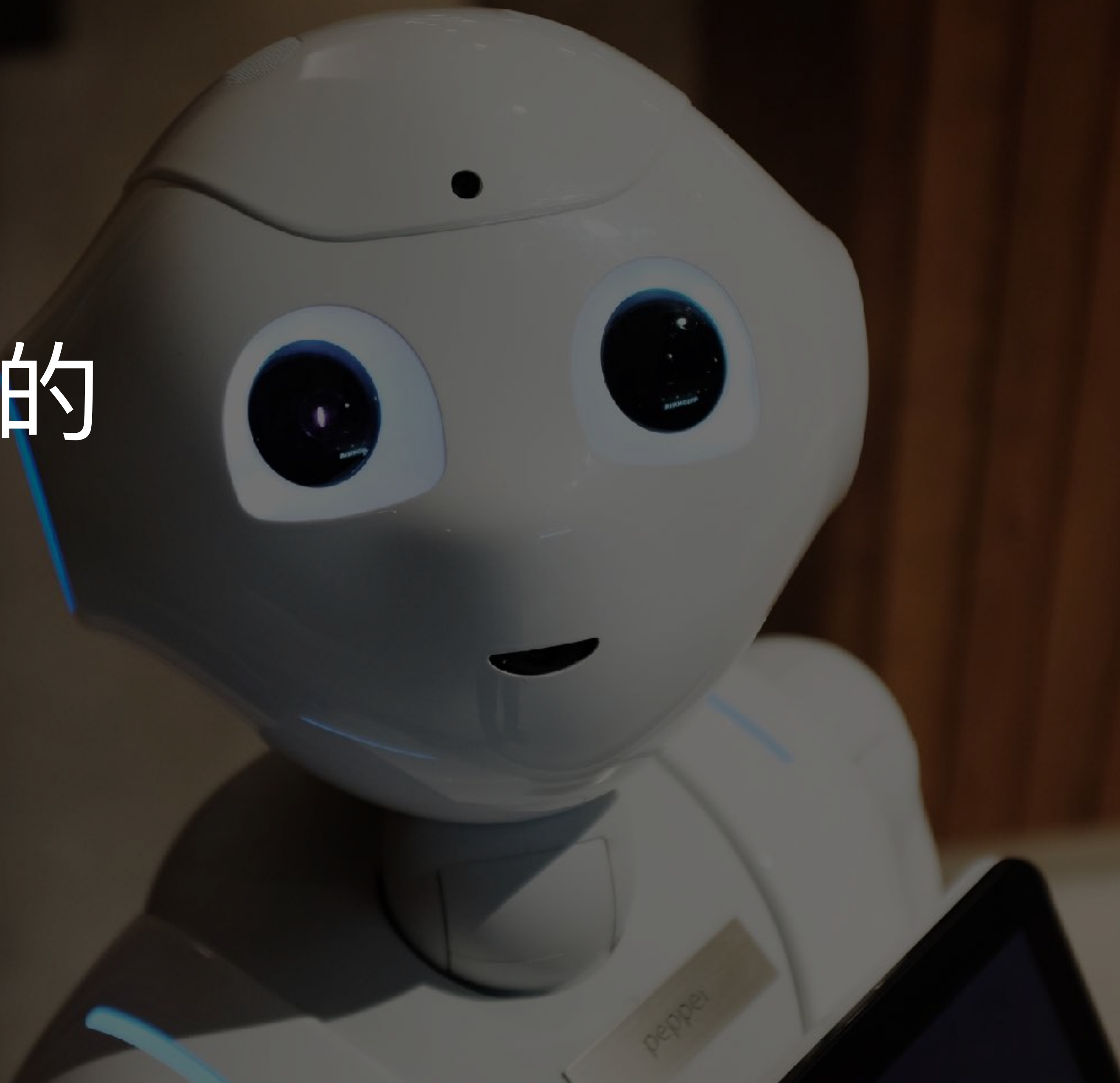
# 必应设计团队介绍



- 全称 R.E.D (Research - Editorial - Design)
- 美国西雅图, 硅谷, 纽约, 北京, 印度和以色列
- 接近200人
- One Microsoft, Windows, Office, Cortana, CRM, etc.

背景介绍

# 人工智能时代的 进阶体验设计



每一次技术革命都对设计实践  
和内容产生重大影响。



# 人工智能

它是研究、开发用于模拟、延伸和扩展人的智能的理论、方法、技术及应用系统的一门新的技术科学。实现模拟人类的智力和能力的技术。





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# 机器学习

专门研究计算机怎样模拟或实现人类的学习行为，以获取新的知识或技能，重新组织已有的知识结构使之不断改善自身的性能。它是人工智能的核心，是使计算机具有智能的根本途径。



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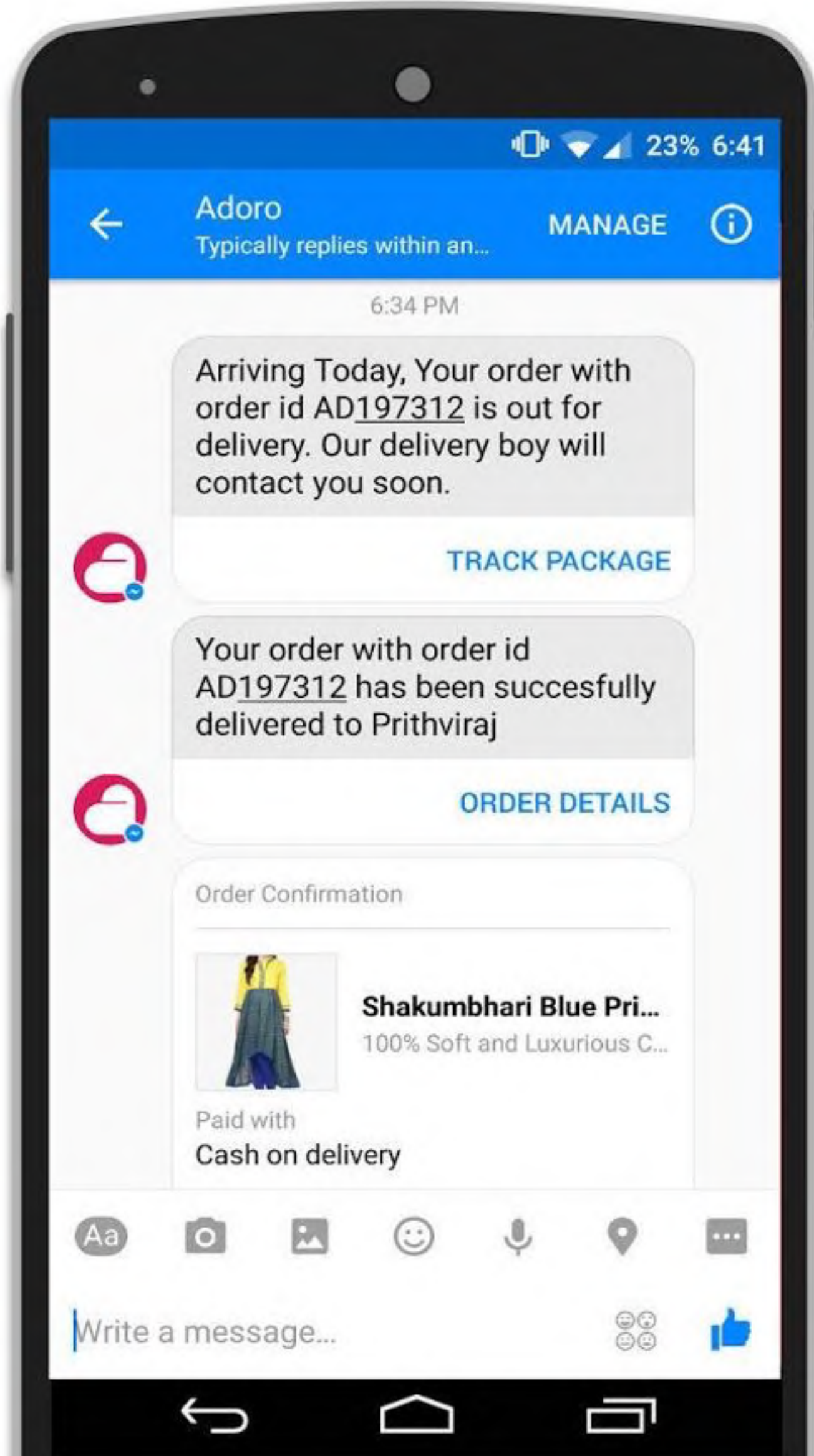
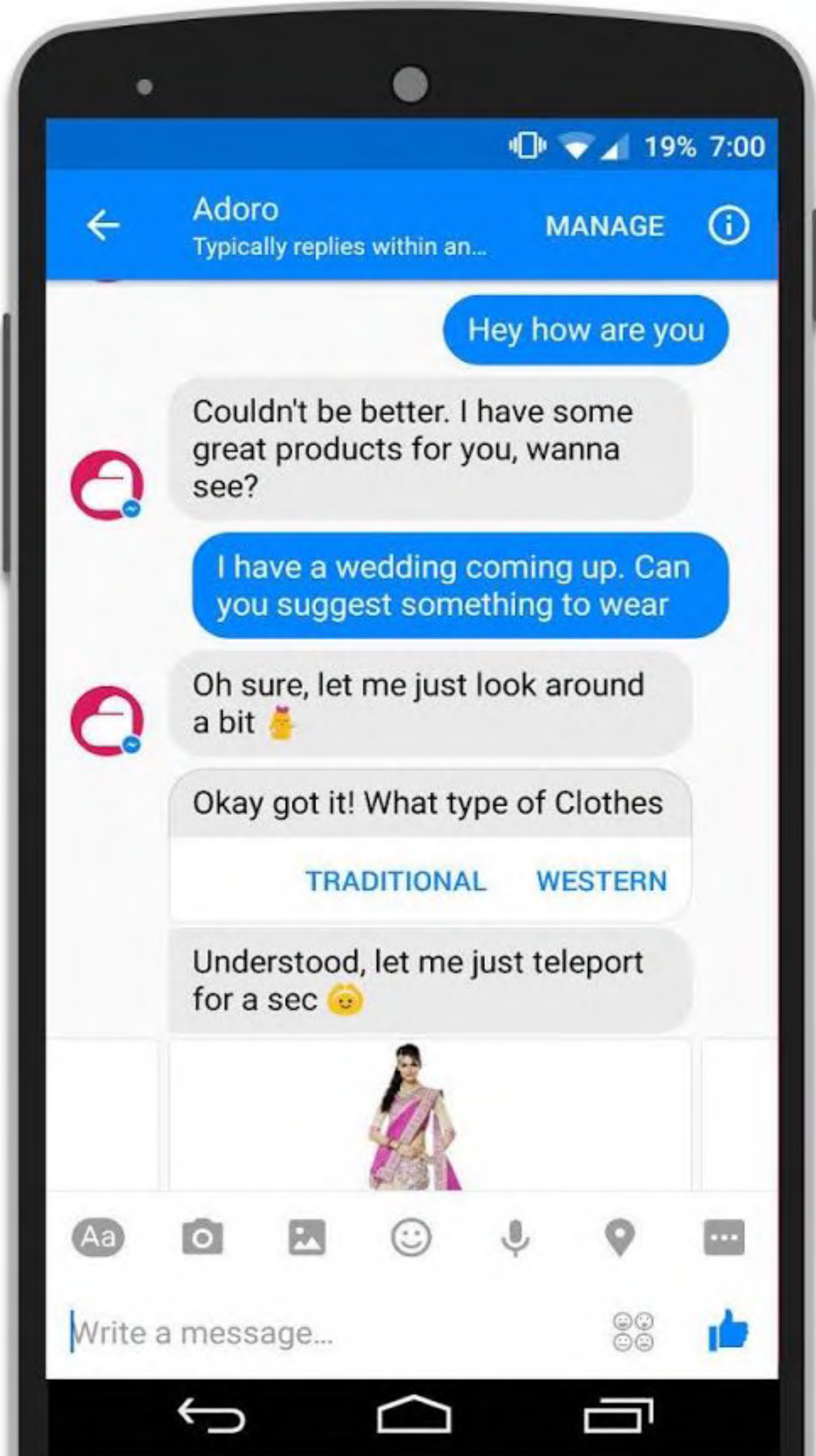
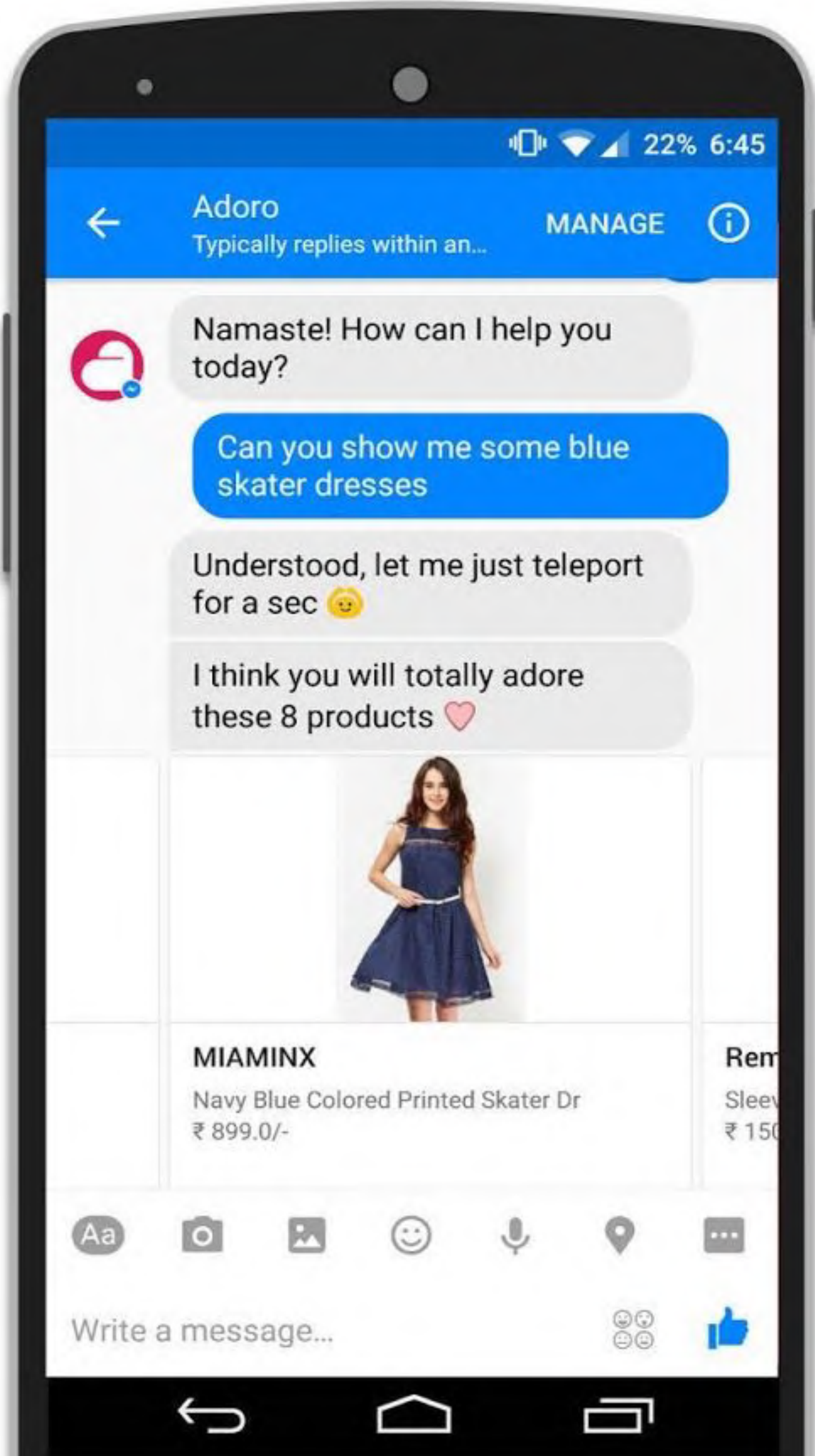


What does it mean to design?



“No matter how cool your user interface is, it would be better if there were less of it.”

Alan Cooper



••••• BITE LV

12:27

85%

“Set reminder to buy  
gazpacho when I leave”  
tap to edit

Here's your reminder for  
when you leave here:

# Reminder

Buy gazpacho  
Leaving: 8-12 Jelgavas iela Riga 1004

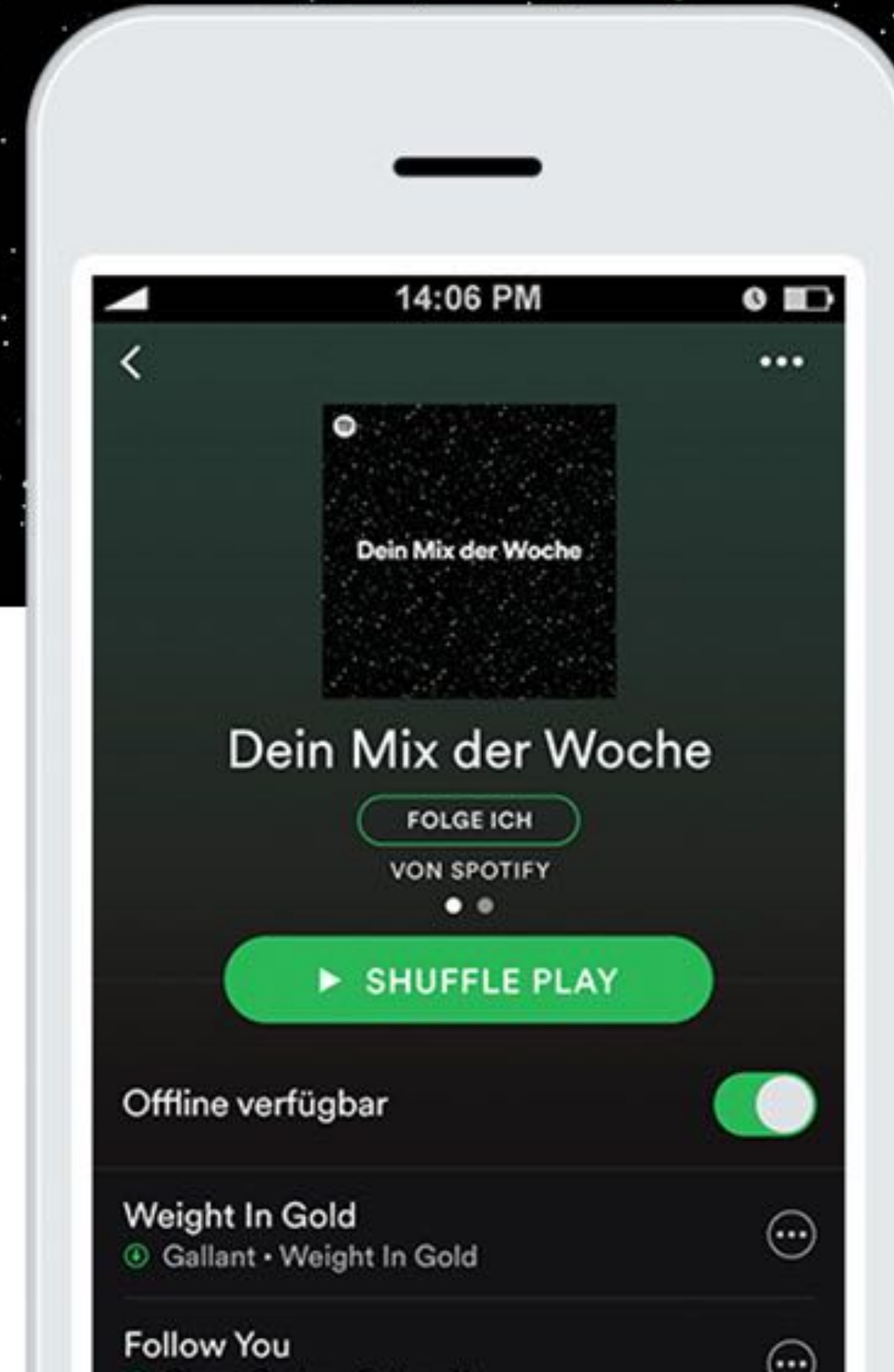
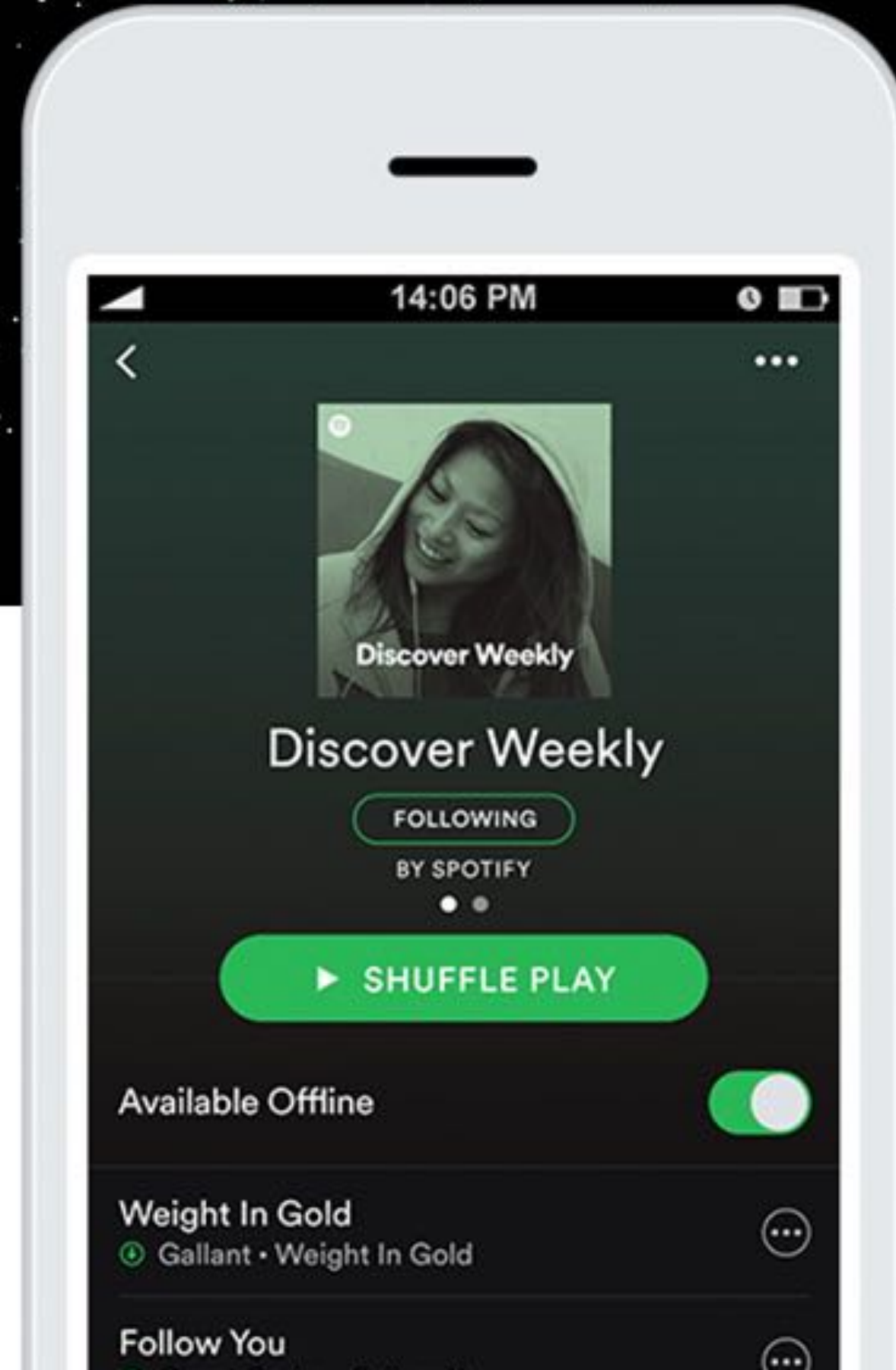
Cancel


Confirm





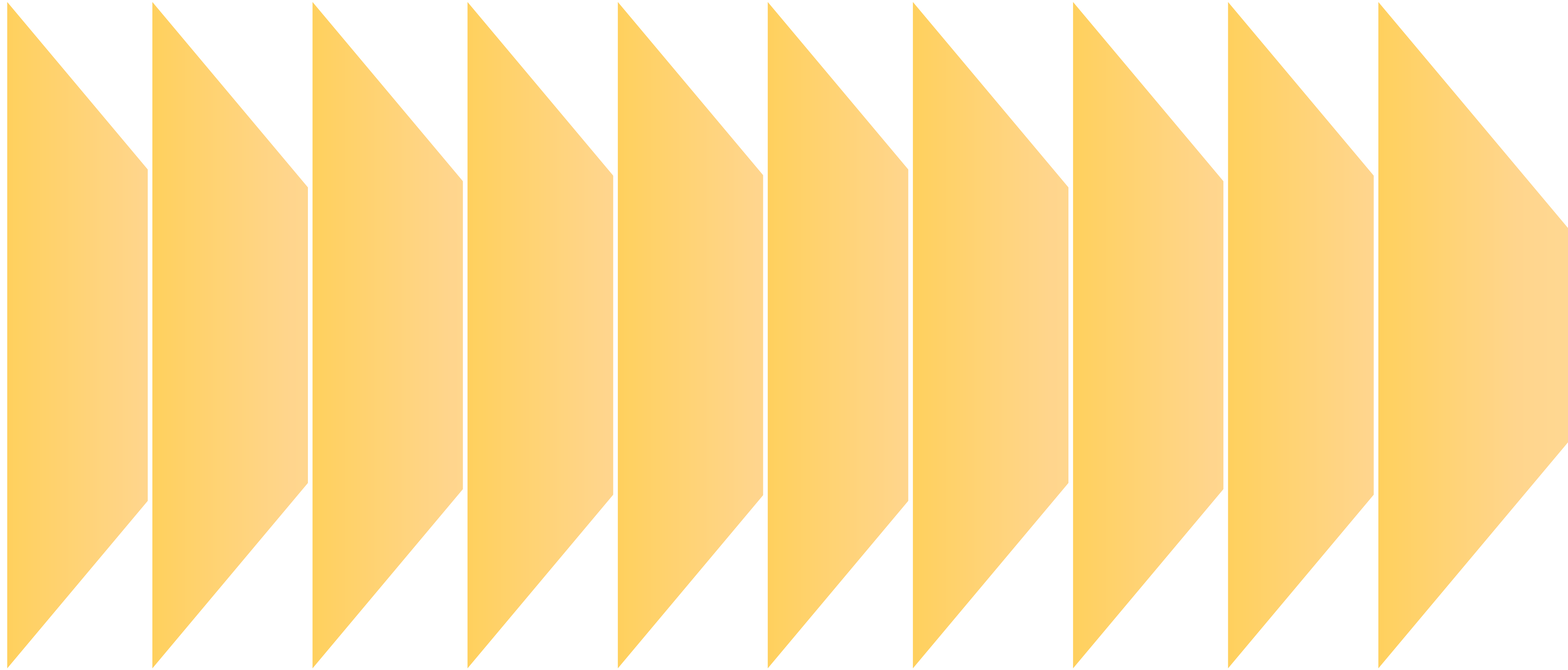
# Discover Weekly



A person with short, light-colored hair, seen from behind, is wearing a white backpack and a blue and white striped tank top. They are looking out over a busy, crowded street market. The street is filled with people, some on motorcycles, and various shops and stalls. The scene is captured in a slightly desaturated, cinematic style with soft lighting. The text "假设你要做一个旅行产品..." is overlaid on the left side of the image in a white, sans-serif font.

假设你要做一个  
旅行产品...





天气

行程

交通

预算

偏好


折扣

活动

法律

文化

季节

A man with a beard and glasses, wearing a blue denim shirt, is leaning forward on a rooftop. He is looking off to the side with a thoughtful expression. The background shows a clear sky and some distant buildings.

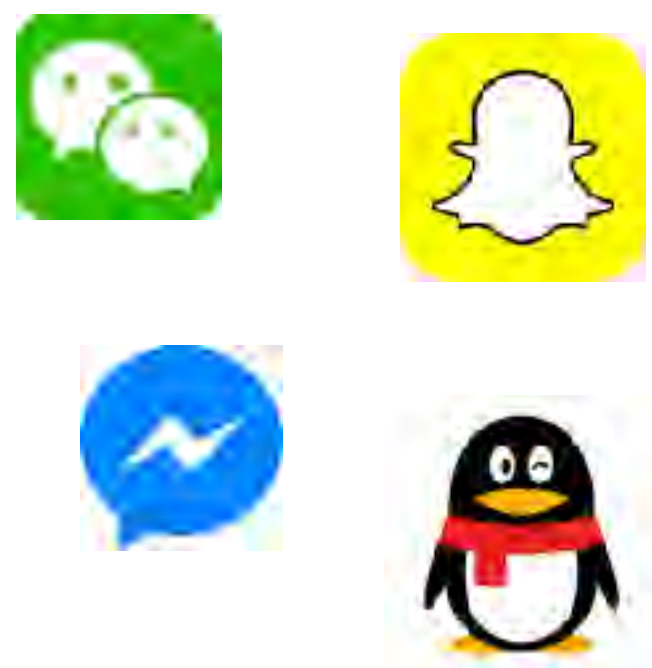
帮助你找到完美的男朋友

# 工作坊时间安排

时间	内容	备注
9:00 10min	开场介绍和工作坊安排	
9:10 20min	大背景介绍	选择题目
9:30 60min	可预期的体验	练习
10:30 60min	数据驱动的个性化	练习
11:30 10min	自动化的内容开发	
11:40 20min	人工智能时代的设计师	Q&A

# 开始我们的练习，选择一个产品开始改进设计

## 即时通讯



## 共享经济



## 线上销售



## 社交网络



## 新闻资讯



## 你的产品?





01

可预期的体验设计

Anticipatory Design for delightful experience

# 预期性设计

## Anticipatory Design

### 创造一套简单的逻辑使产品简单易用

Developers have been championing the **Don't Repeat Yourself (DRY)** and **Keep It Simple, Stupid (KISS)** principles for years, and it's time to bring that painless logic to the way our users interact with what we're building. Give it some thought: if we ask users to complete a task more than once within any given process, isn't that an **inefficient use of their time**? Similarly, isn't it redundant to ask someone what they prefer when you have collected that information in the past?

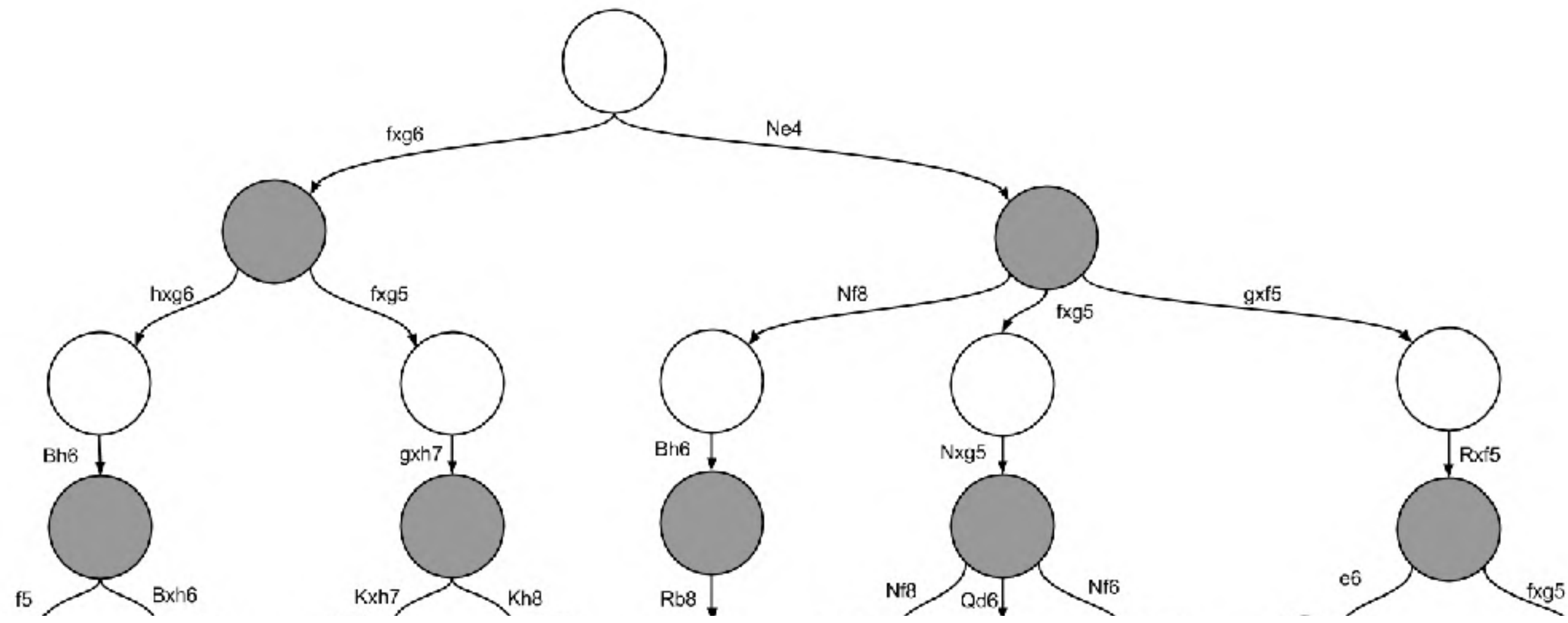
In psychology, we use the term **cognitive load** to describe the amount of mental effort being used in the working memory at any given moment in time. For everyone involved in user experience design, cognitive load is a crucial consideration. Are we doing everything in our power to relieve the strain caused by learning something new to use our product? How can we reduce the number of elements that our users need to worry about at any given time? Reducing cognitive load is one of the cornerstones of anticipatory design, as it helps create a more pleasurable experience by foreseeing our users' needs.

It looks like you're writing a letter.

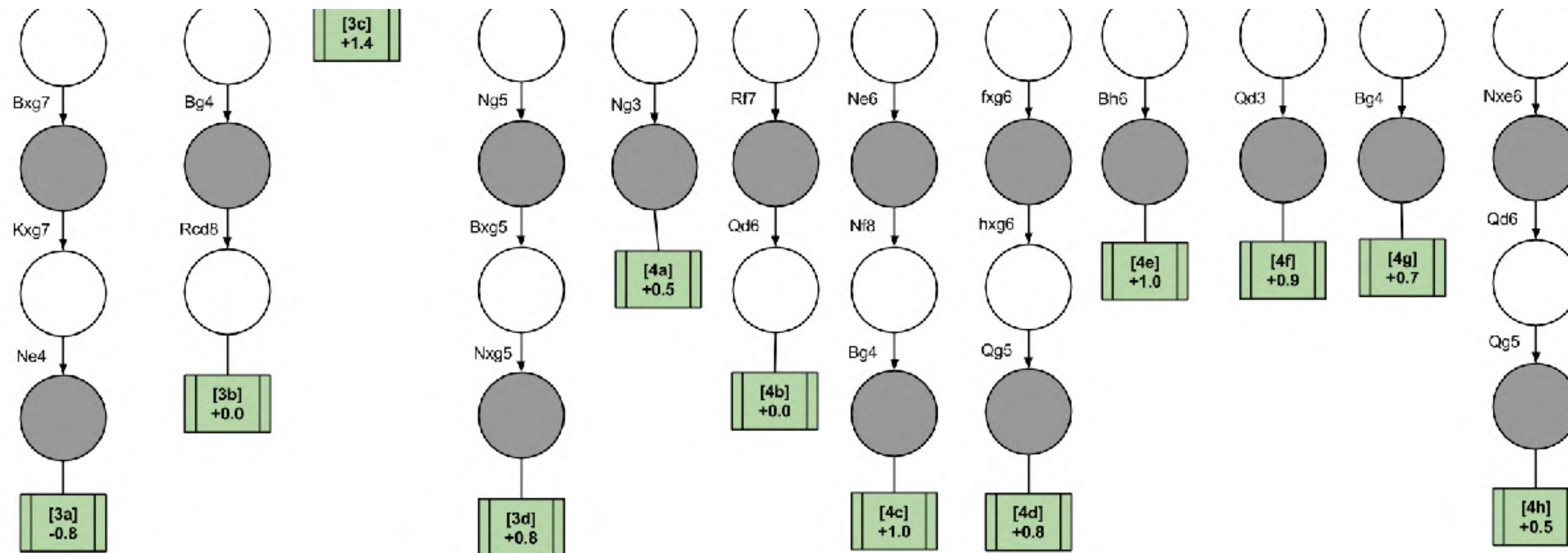
Would you like help?

- Get help with writing the letter
- Just type the letter without help
- Don't show me this tip again





If users do X, then show them Y.



# If users do X, then show them Y.

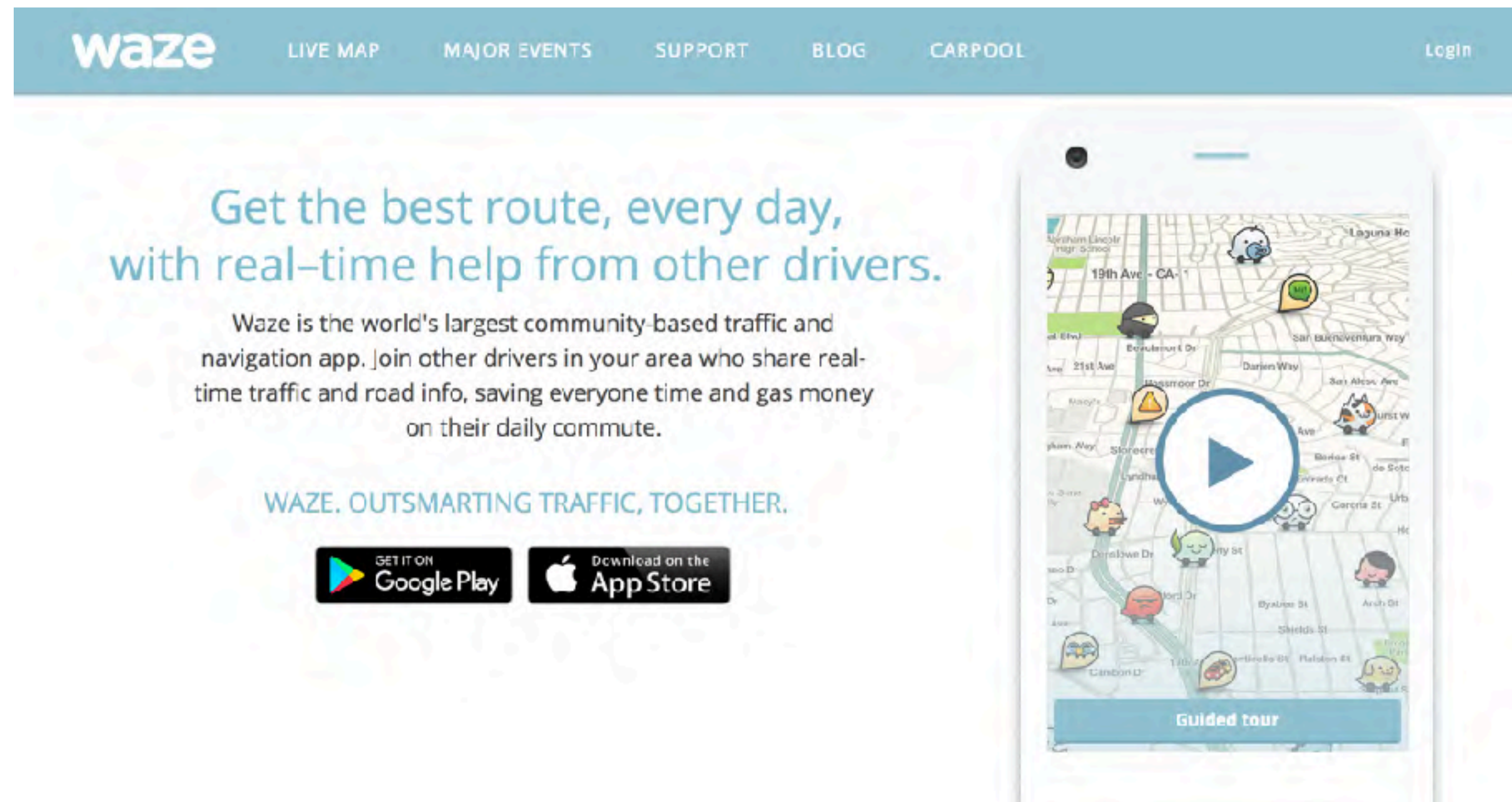




# Navigation service - Waze

## Available types of reports\*

Report Traffic Jam	Moderate Traffic	
	Heavy Traffic	
	Standstill	
Report Police	Hidden Police	
	Visible Police	
Report Accident	Minor Accident	
	Major Accident	
Report Hazard	Hazard on road	Object on road
		Construction
		Pothole
		Roadkill
	Hazard on Shoulder	Car stopped
		Animals
		Missing sign
	Weather Hazard	Fog
		Hail
		Flood
Ice on road		
Report Camera	Speed camera	
	Red light camera	
	Fake camera	
Report Closure	Closure due to Hazard	
	Closure due to Construction	
	Closure due to Event	
Map Chat		
Report Map Issue		
Update Gas Prices		
Check in		



The image shows the Waze website header with navigation links: LIVE MAP, MAJOR EVENTS, SUPPORT, BLOG, CARPOOL, and a Login button. Below the header is a promotional banner for the Waze mobile app. The banner features the text: "Get the best route, every day, with real-time help from other drivers." followed by a description: "Waze is the world's largest community-based traffic and navigation app. Join other drivers in your area who share real-time traffic and road info, saving everyone time and gas money on their daily commute." Below this is the slogan "WAZE. OUTSMARTING TRAFFIC, TOGETHER." and two buttons for downloading the app: "GET IT ON Google Play" and "Download on the App Store". To the right of the text is a smartphone displaying the Waze app interface, which shows a map with various traffic icons and a "Guided tour" button at the bottom.

The founders of [Waze](#), a popular navigation app, noticed that people could use one another's feedback to drive smarter. They went on to create an interface where drivers can not only warn one another about impending issues (traffic jams, accidents, police ahead, among others), but also communicate openly via messages.

There are several elements of anticipatory design in Waze, but some of the most outstanding include: a warning when the car is moving and someone is typing (should always be a copilot); alerts when other drivers have experienced issues; and live notifications when a better route is found. The fact that the app is constantly looking for better routes based on user feedback is, in and of itself, a highly successful anticipatory feature. Once you set your destination in the app, you can basically just lean back to focus on your driving.

# Retail service - Brita & Amazon

Your filter alert and your [\\$3 coupon](#) are ready to go. [View online.](#)

CONGRATULATIONS,  
your filter reminder has been activated

Laura, thanks for setting your alert. Now you'll always remember to replace your filter and enjoy refreshing, great-tasting water. Log into [Brita.com](#) now to claim your coupon.

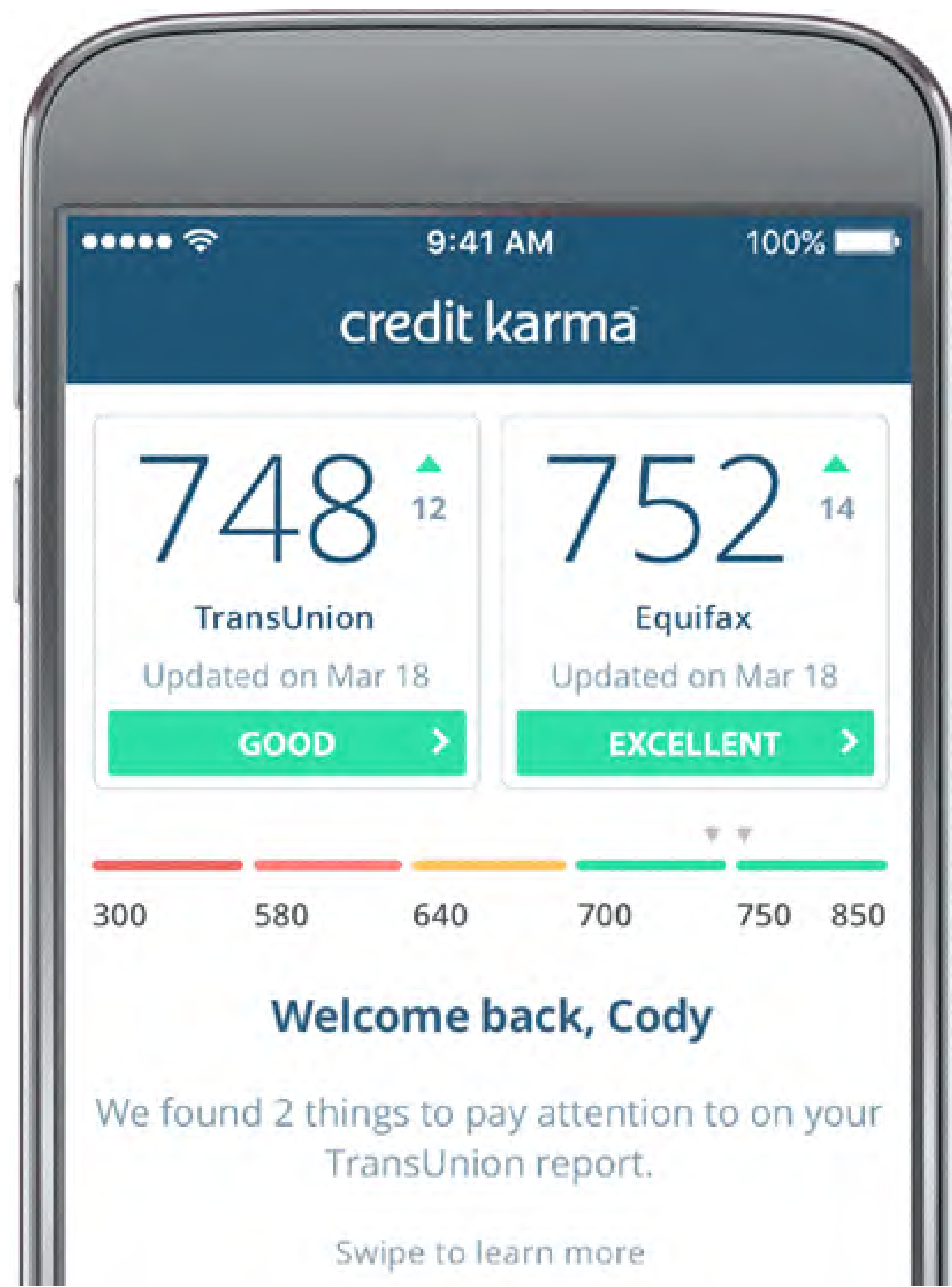


Also, remember to visit your [My Brita](#) page to see the latest offers we've lined up for you.



Many other types of retailers also experience this challenge, and Amazon will soon launch an anticipatory design feature to help them connect physical devices to online ordering. [Dash Replenishment Service](#) integrates with devices to detect when supplies (of anything) are running low. This is a potential game changer for brands manufacturing printers, coffee machines and other appliances with lucrative refills.


# Finance service - Credit Karma



Suggested For Your Credit

Credit One Bank® Credit Card with Gas Rewards

Approval Odds†  
Good



★★★★☆ 357 Reviews

APPLY NOW

- Unlimited 1% cash back gas rewards
- Get Pre-Qualified without affecting your credit score
- Keep an eye on your credit information with free online monthly credit score tracking
- Choose your card design from our premium gallery
- Email or text alerts to remind you when your [Show More...](#)

[Learn More](#)

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A photograph of a desk setup. A large monitor is tilted back, displaying a landscape of mountains and a winding road. In front of the monitor is a silver keyboard and a white mouse on a brown mousepad. A black pen lies on the desk. A smartphone is visible in the foreground. The desk is made of light-colored wood. The text "It absolutely means more work for us and less work for users." is overlaid in white on the monitor's image.

**It absolutely means more work for us and less work for users.**

# 练习一 为你的产品定制可预期的体验

Design an  
anticipatory feature:

If users do X,  
then show them Y.

## TIPS

- 有机会使你的产品任务和流程更简单?
- 你的产品传达了太多的信息, 让用户感到困惑?
- 是否可以基于已有的信息, 帮助用户输入有效信息?
- 可以通过流程或任务模版, 节省用户的时间?
- 试着提醒用户接下来的选择, 并提供额外的价值?
- 是否可以避免用户犯错误, 或者提供其他选择?
- 尝试提供给用户引导说明?

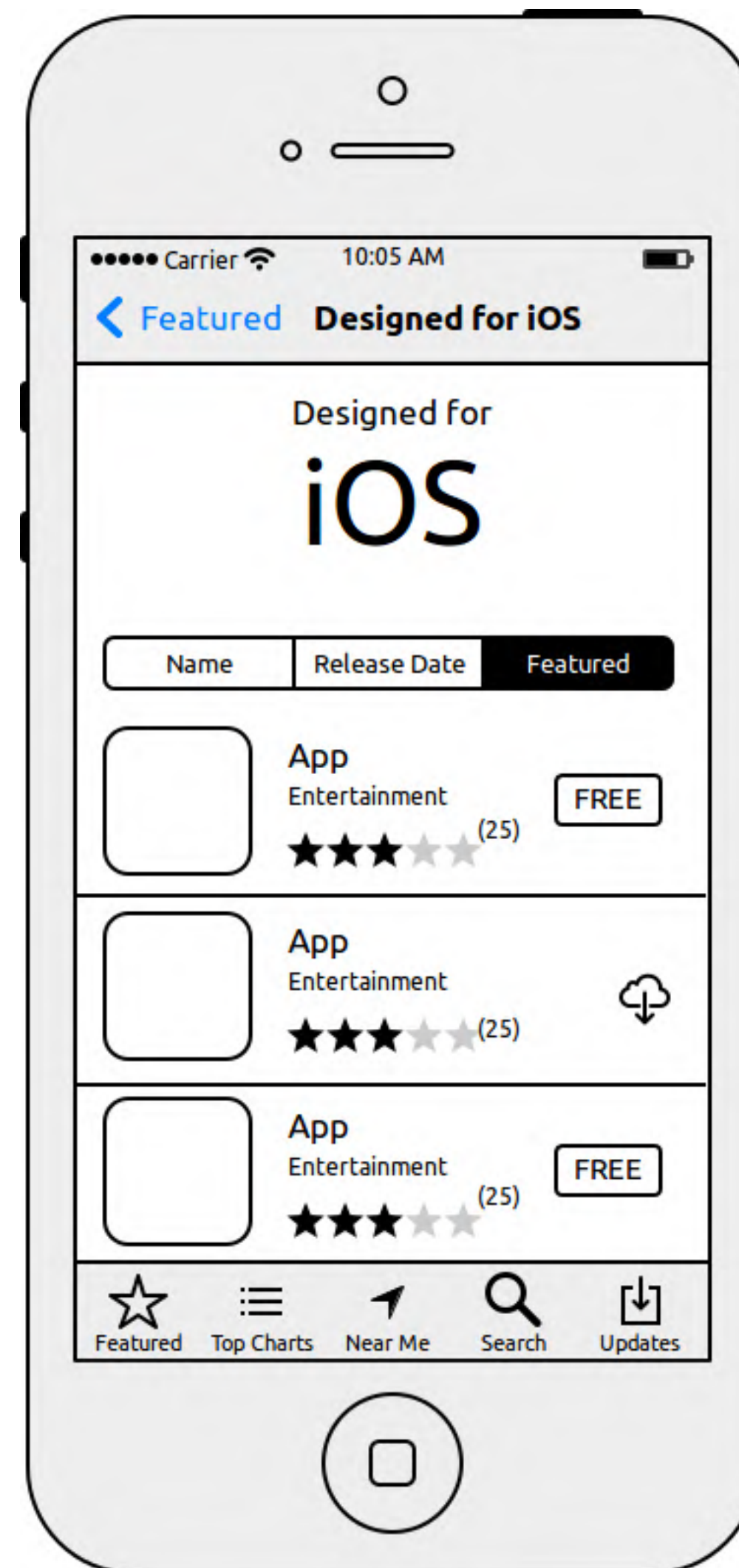
# 作业格式

产品名称：**理财专家**

用户输入身  
份证号码

自动填写

自动填写生日  
或户口所在地





02

数据驱动个性化

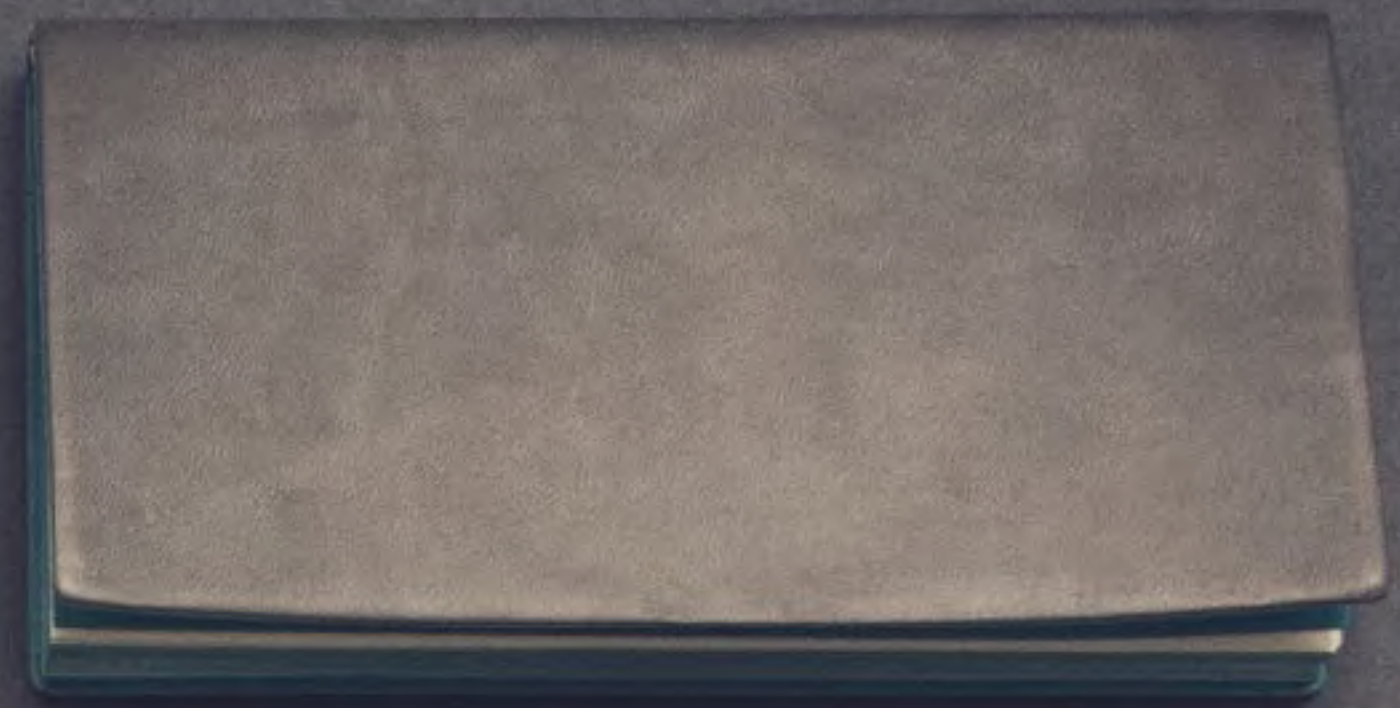
Data-driven Design for product personalization



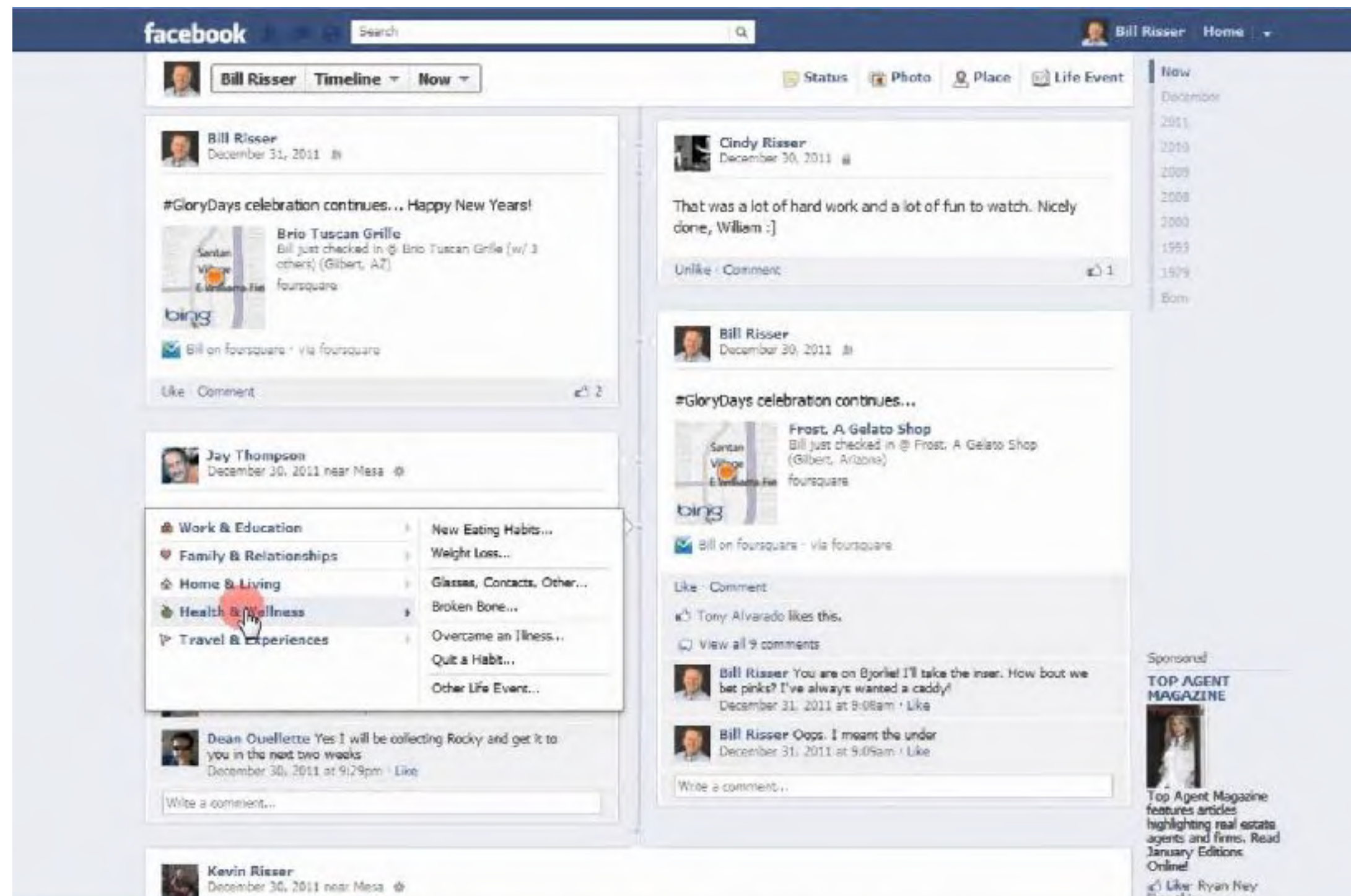
ENTIRE DELIVERY PROCESS OF PULP, SYRACUSE

W. H. HARRIS & CO.





# Social network - Facebook

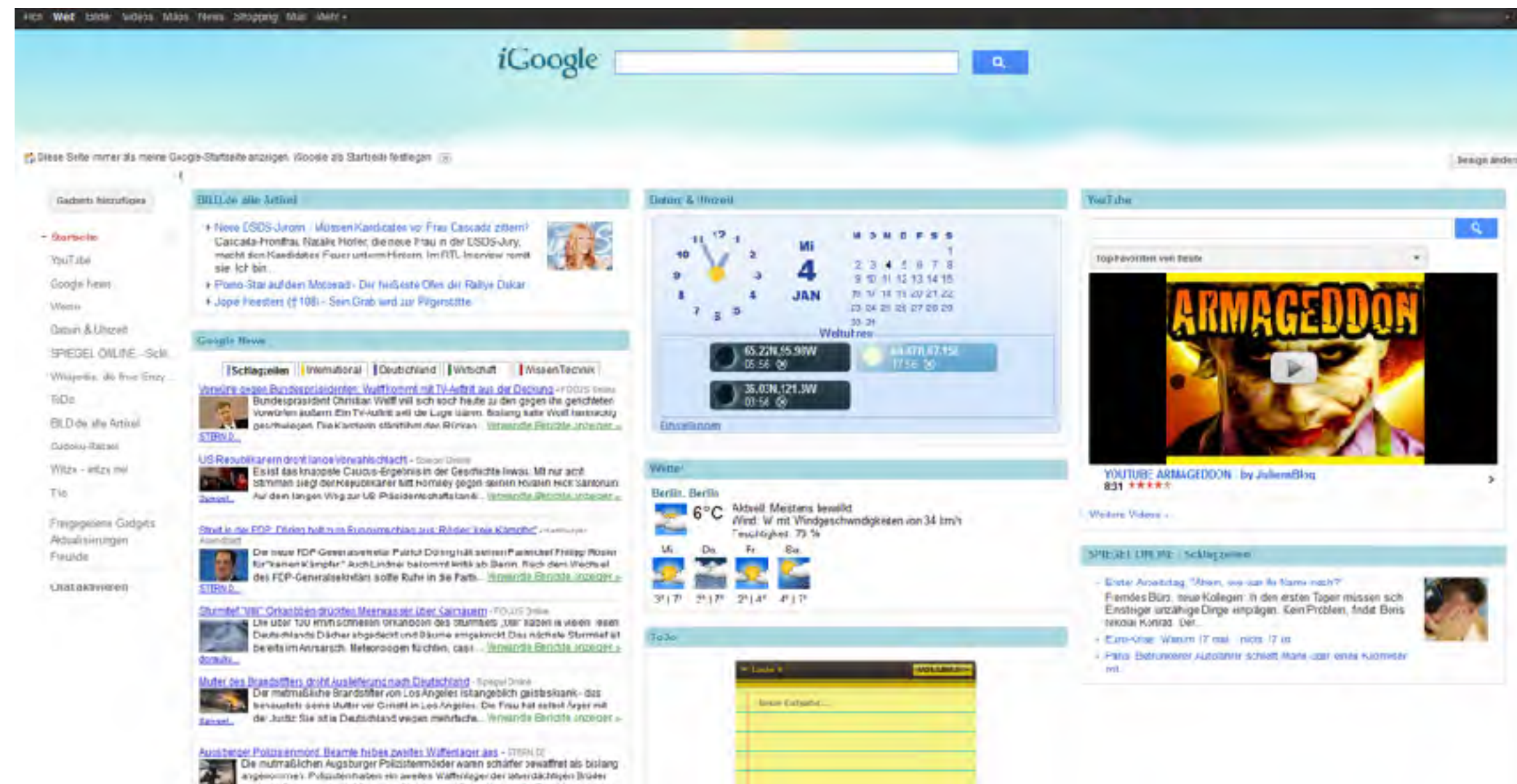


Timeline in 2012

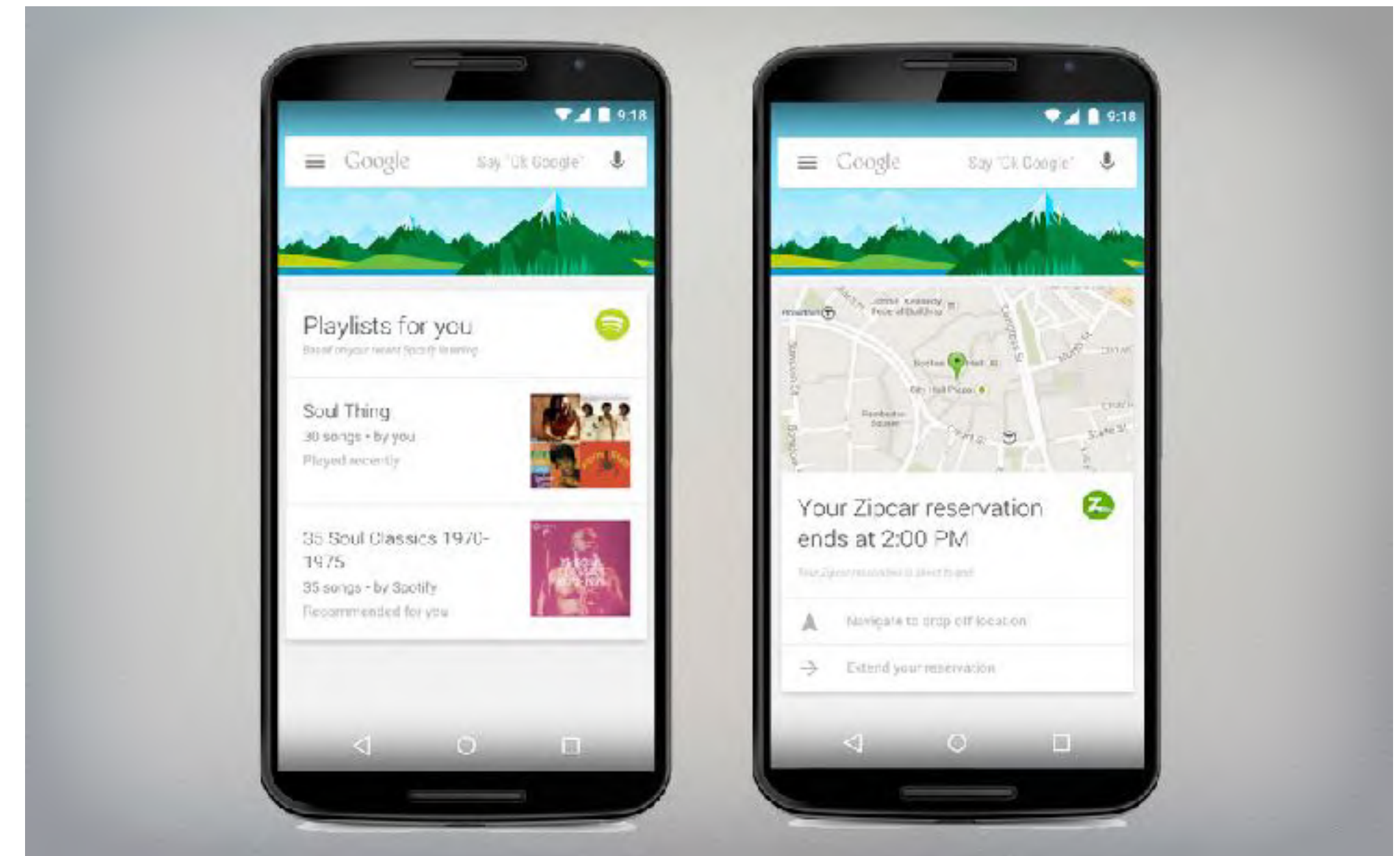


Feed today

# Knowledge service - Google



iGoogle in 2008



Google Now today



# Personalization to AI



Today

Tomorrow

# 练习二 收集数据定制个性化的体验



# 作业格式

产品名称：**滴滴**

每周订单和  
路线数据

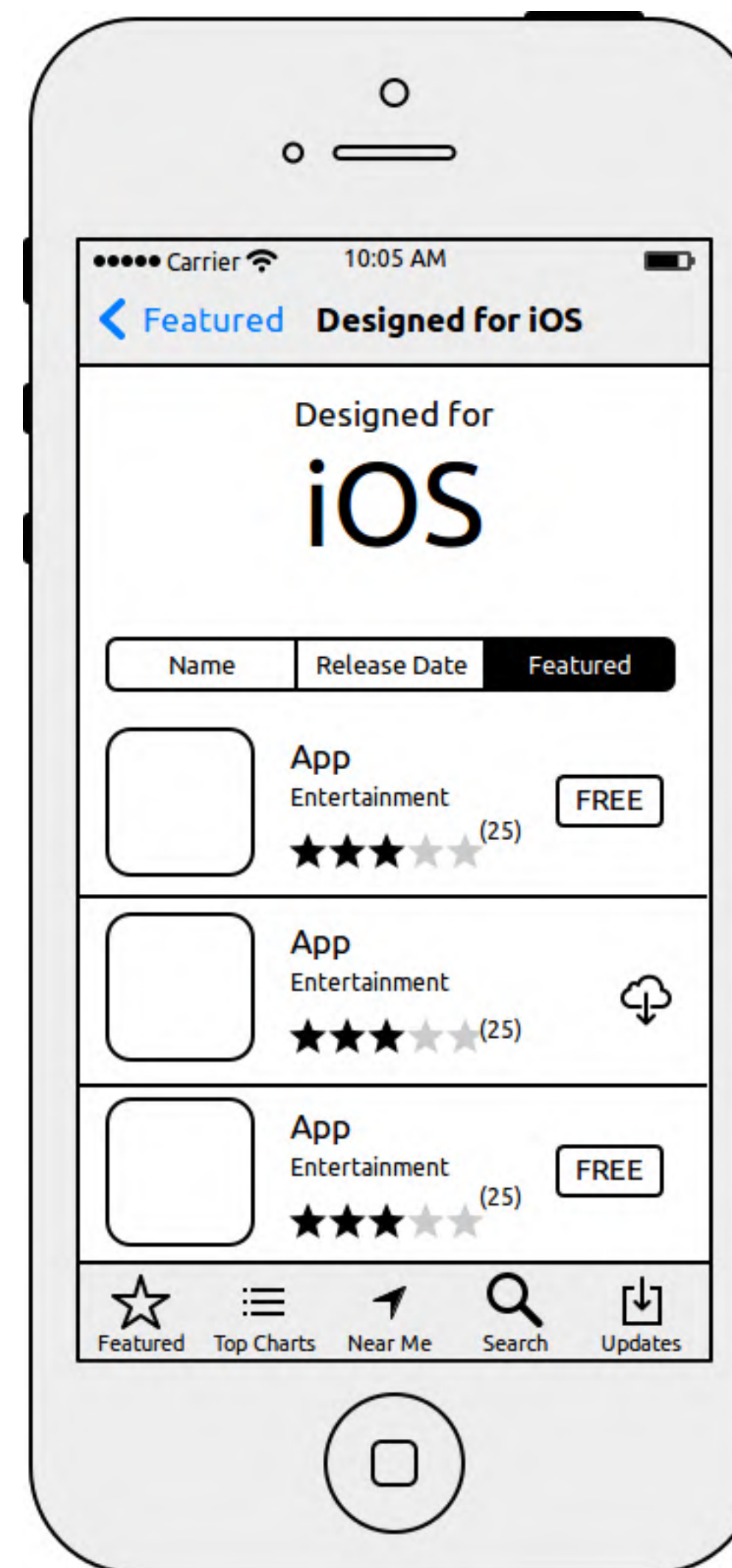
动态生成

时间，地点，用户偏好等



周中早晨  
上班线路

去星巴克买咖啡，接  
同事并拼车去公司



# 03

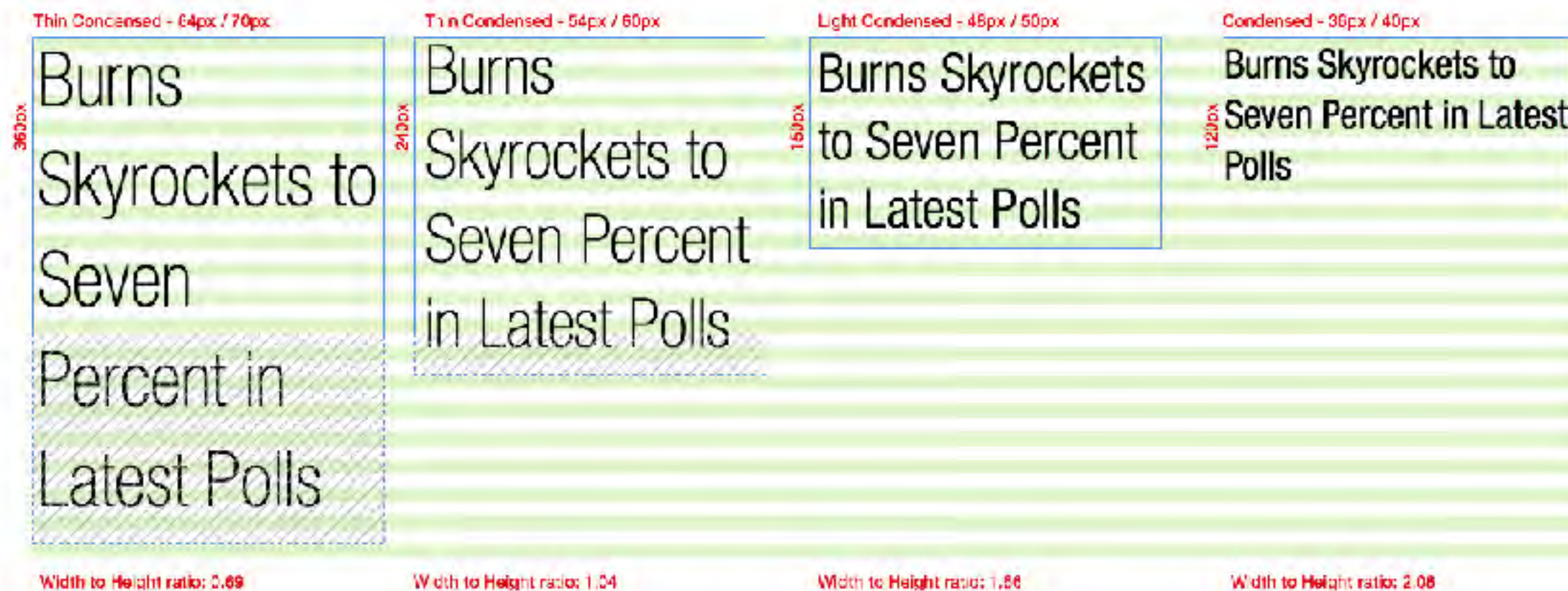
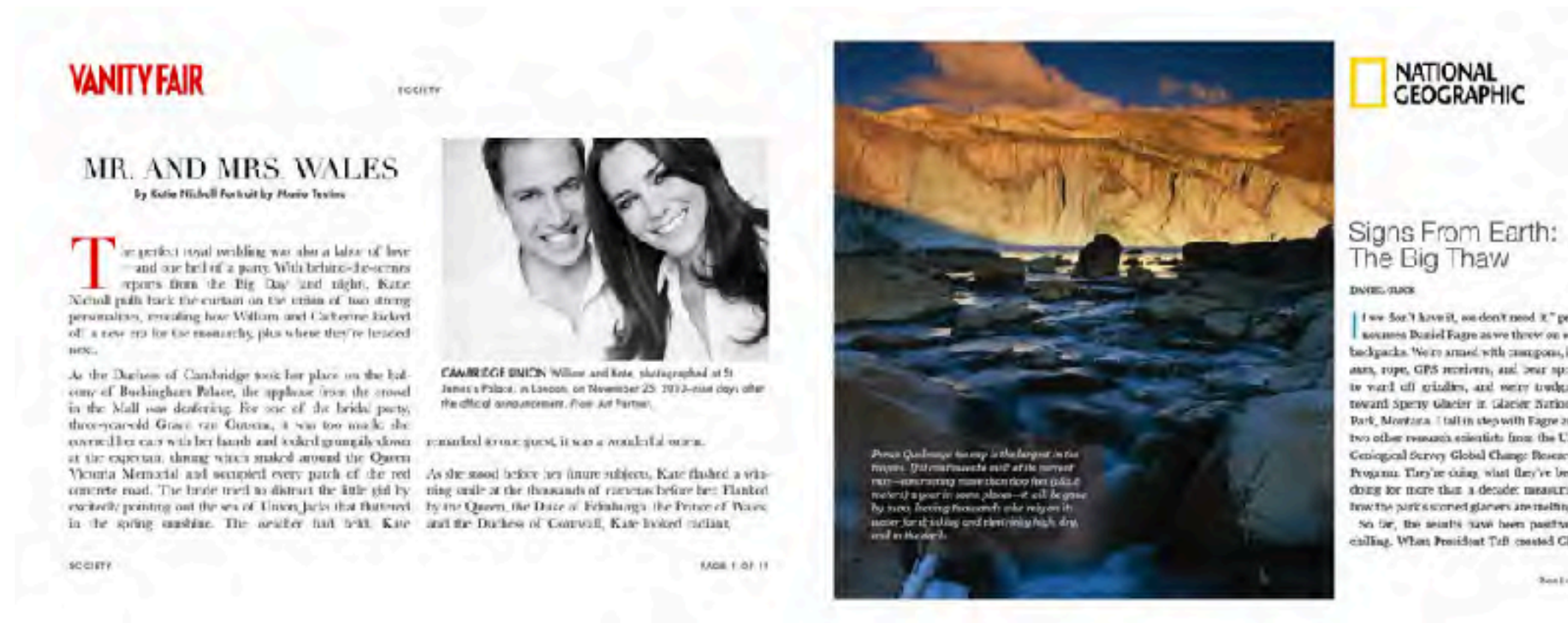
## 自动化的内容开发

Design automations for product cycles

```
<!--[if !IE]>
<html <?php language_attributes(); ?>
<head>
<meta charset="<?php bloginfo( 'charset' ); ?>" />
<meta http-equiv="X-UA-Compatible" content="IE=edge" />
<meta name="viewport" content="width=device-width, initial-scale=1" />
<meta name="description" content="<?php bloginfo( 'description' ); ?>" />
<meta name="author" content="<?php bloginfo( 'author' ); ?>" />
<!--link rel="icon" href="<?php echo get_template_directory_uri(); ?>/img/favicon.ico" />
</if -->
<title><?php wp_title( '&dash;', true, 'right' ); ?></title>
<?php wp_head(); ?>
</head>
<body <?php body_class(); ?>
<header>
<div class="container">
<a class="logo" href="<?php echo get_template_directory_uri(); ?>">
</div>
</header>
<?php $defaults = array(
'theme_location' => 'nav',
'container' => 'nav',
'container_class' => 'nav',
); wp_nav_menu( $defaults );
```



# Flipboard Layout Automation Engine



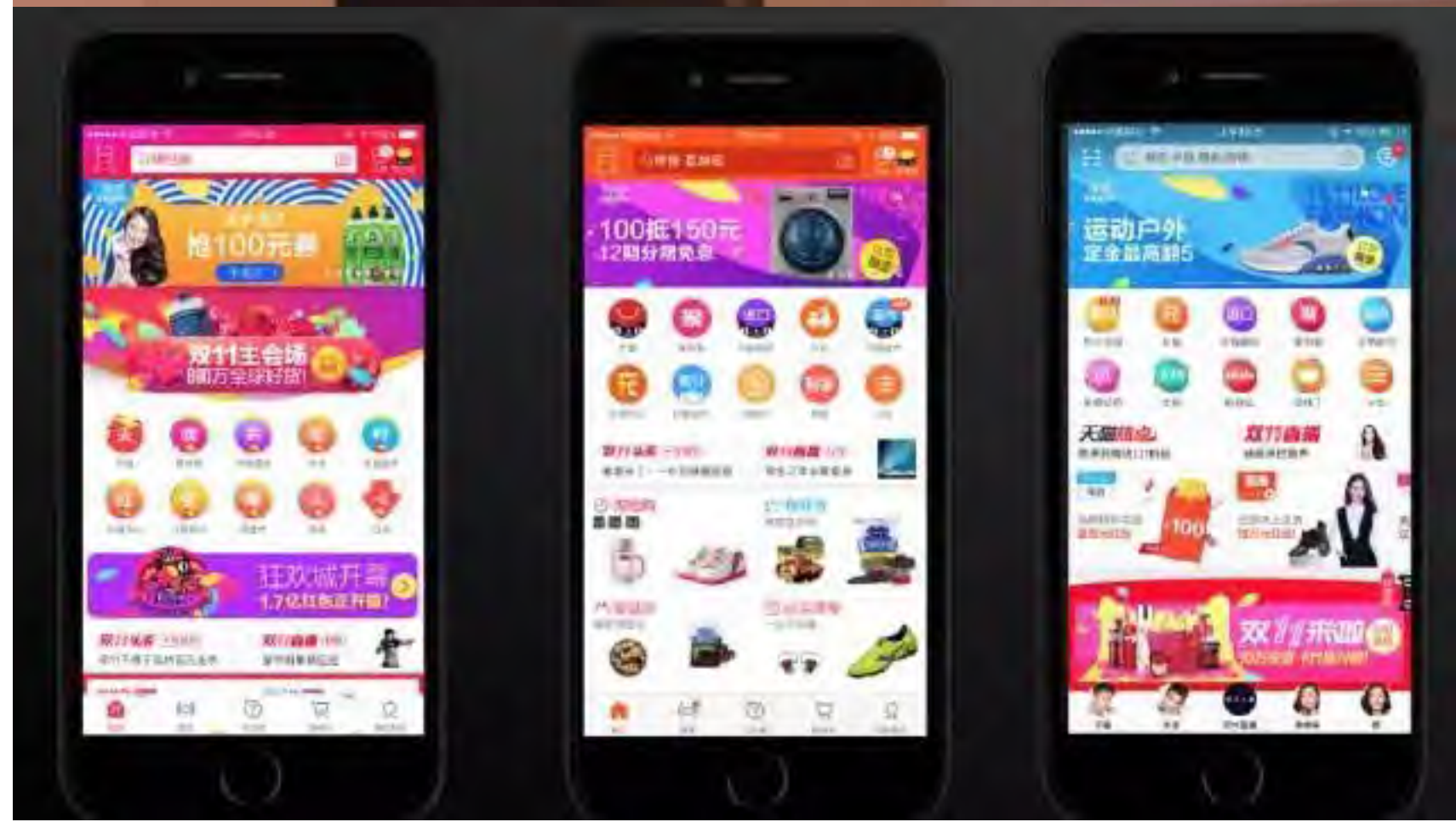
# 阿里鲁班



1.设计数据化：更多维，机器可学习



风格：撞色  
质量：5分



6.文字组合

5.高亮

4.主体

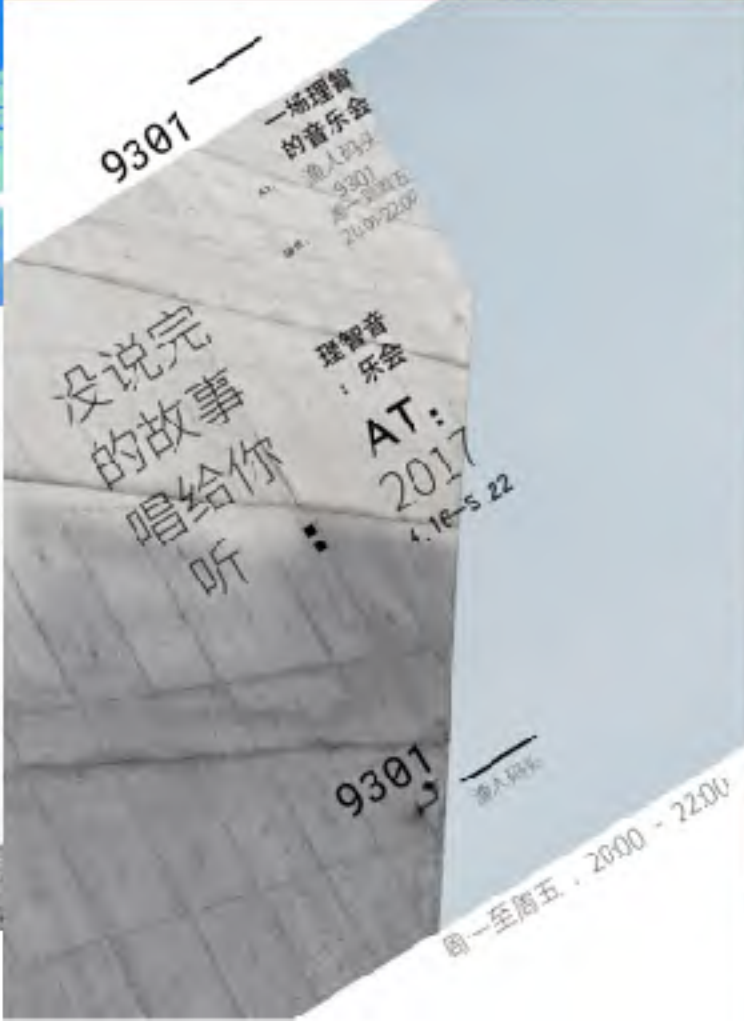
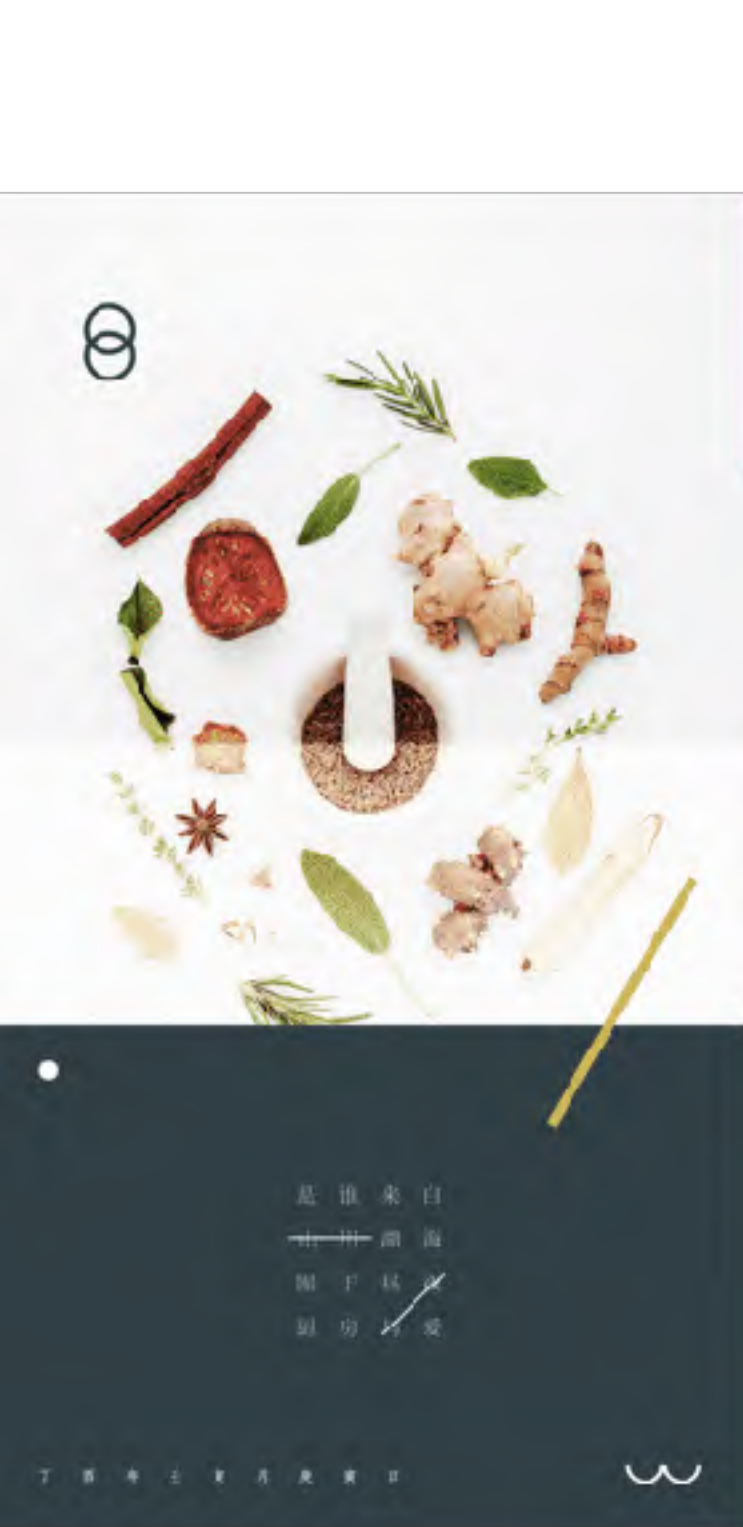
3.区域修饰

2.蒙版

1.背景



# Arkie



# The Grid - if websites just made themselves...



# 节省开发和运营成本



结语

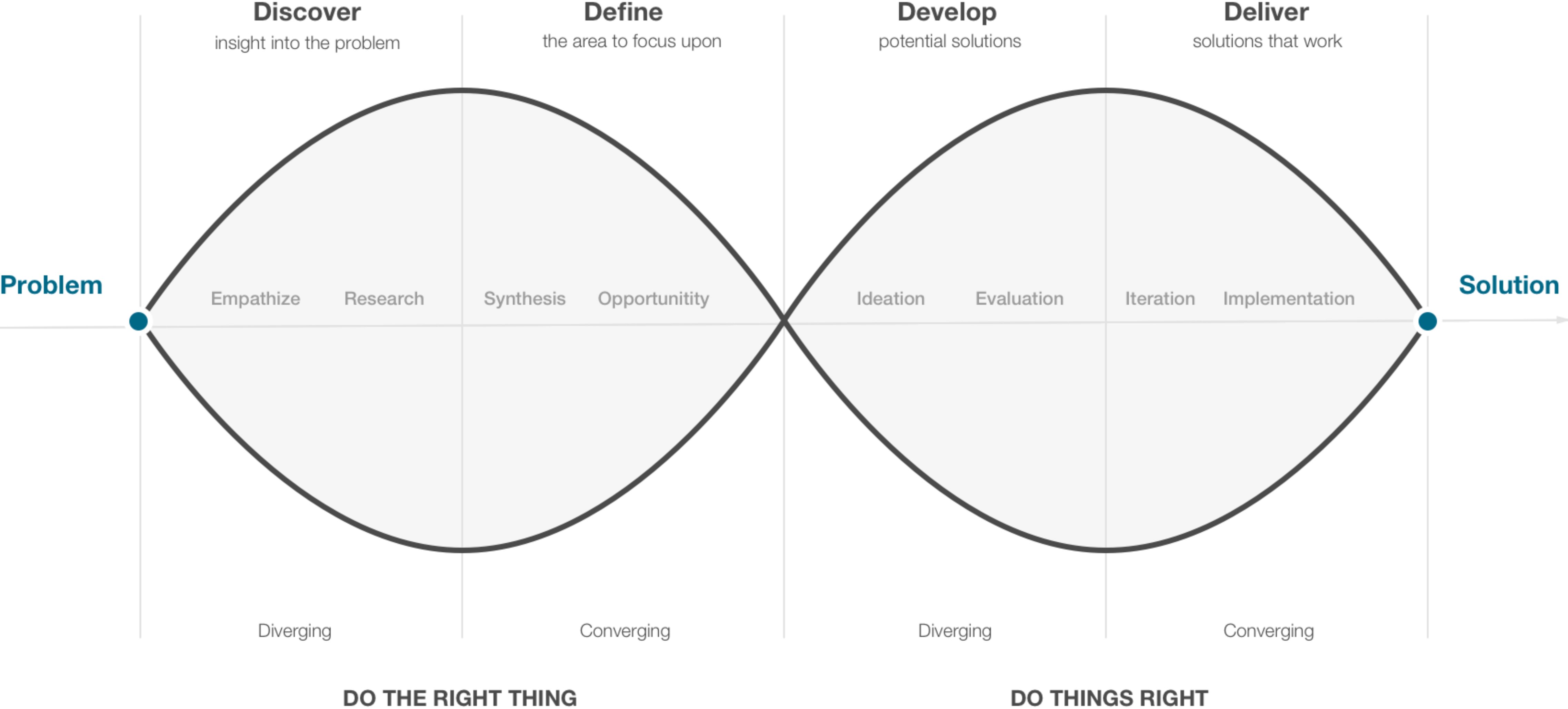
# 人工智能时代 下的设计师



**Will Robots Replace Designers?**

机器人会取代设计师吗？

# Design Process





**Designers work “in pair” with algorithms to solve product tasks**





# 01

## 可预期的体验设计

Anticipatory Design for delightful experience



# 02

## 数据驱动个性化

Data-driven Design for product personalization



# 03

## 自动化的内容开发

Design automations for product cycles



