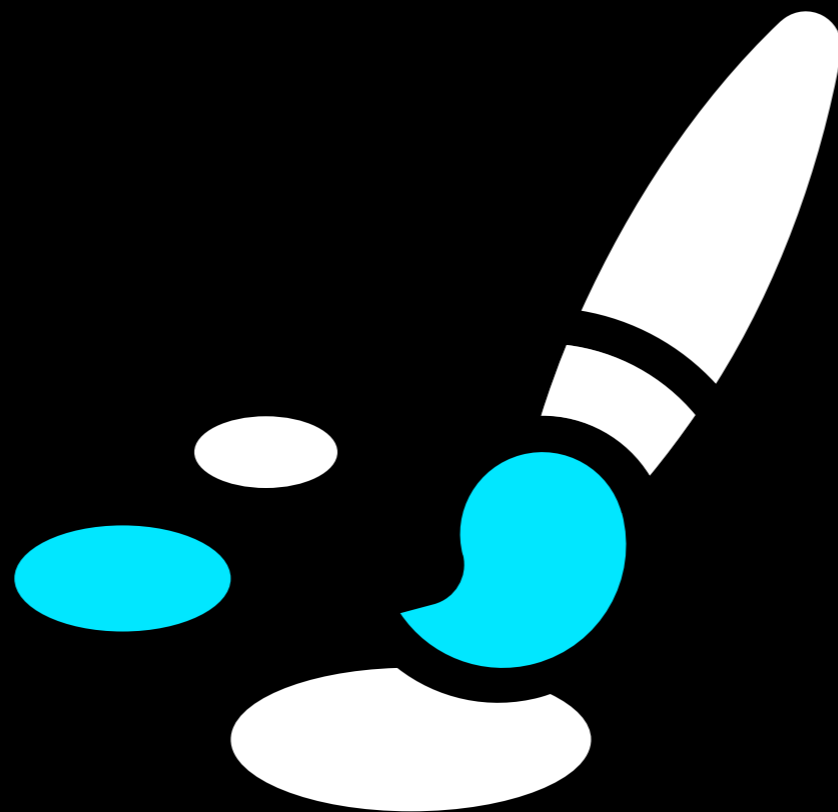


# Icon Design

UI Needs Icons



# Wim Crouwel - De Stijl



# Methodical Thinking

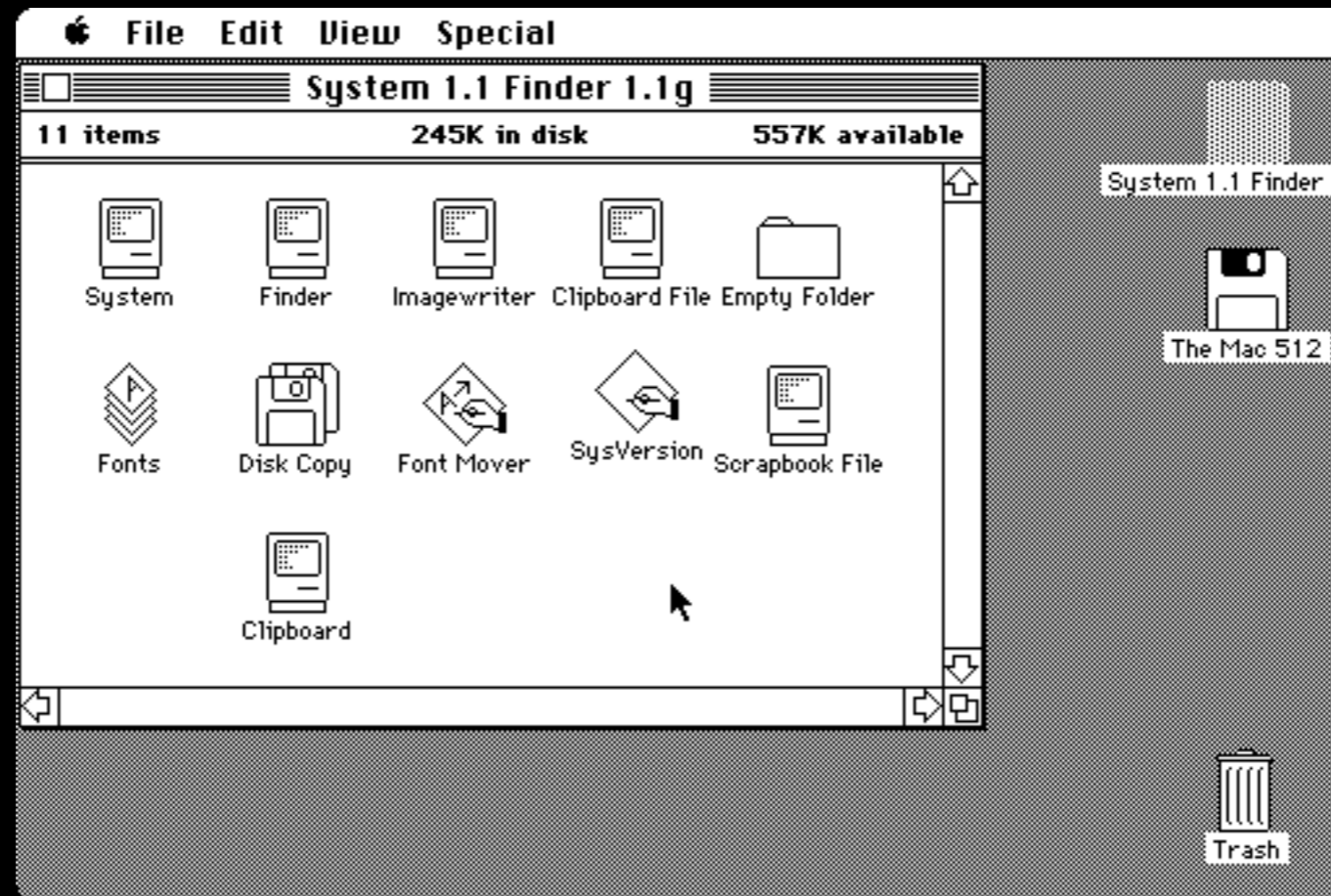


# Methodical Thinking

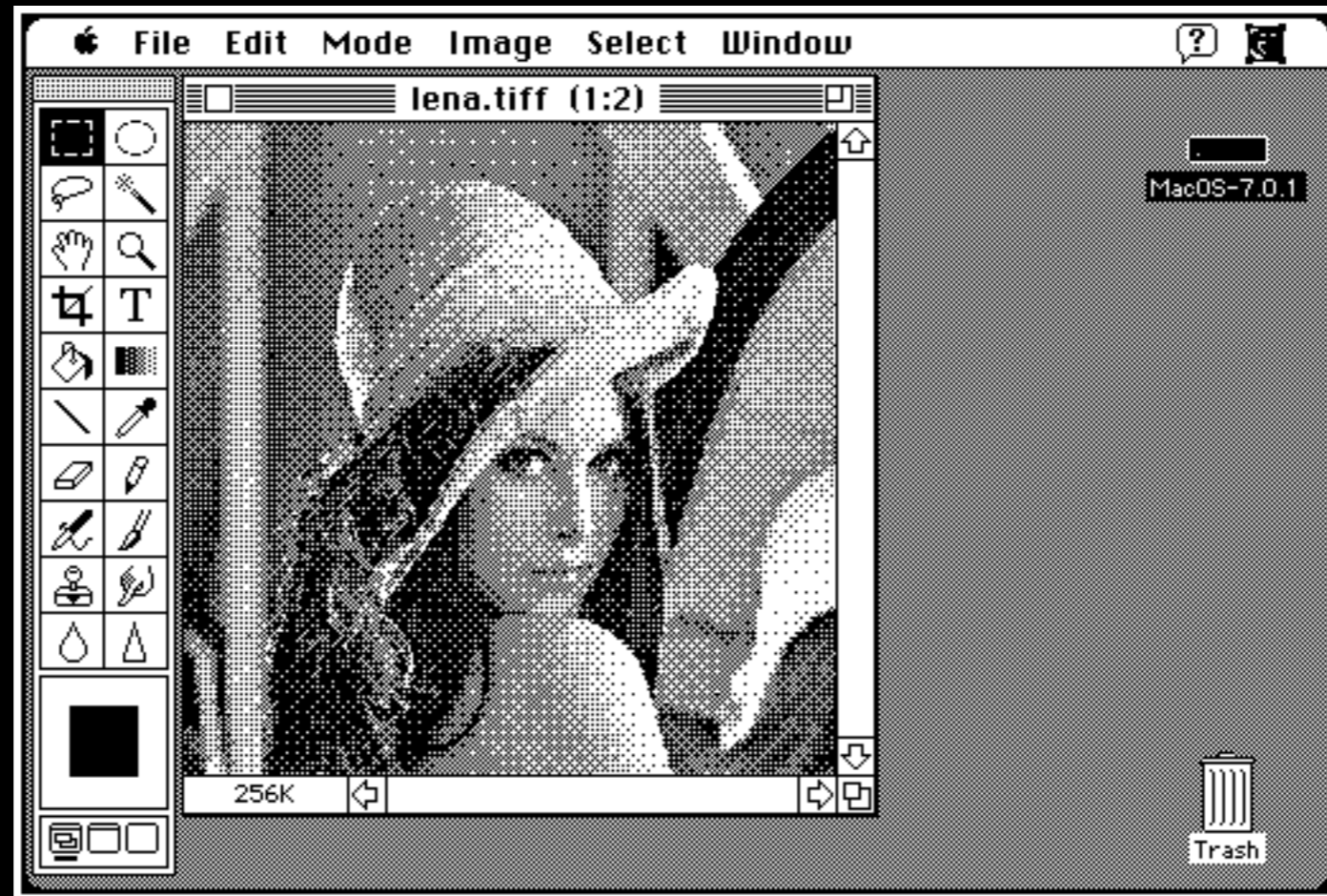


# Mac Desktop

One of the first icon based UI's



# Photoshop



The first Photoshop User Interface

# Why UI Needs Icons

- UI needs ordering
  - text alone isn't scannable
- Icons need no translation
  - cultural differences
- Color, shape and position help recognition
- Icons are good buttons
- Icons save Space
- Icons support brand identity

# UI's needs ordering

Text alone isn't scannable.

Icons are used as unique bullet points to guide the way through a User Interface.

Just using bullet points is not the answer to save yourself work, Users look at Color, Shape and Position to remember where they are, even if they don't actively understand the icon, so unique icons are important.



# Icons need no translation

Icons do need translation...

but a limited amount of icons can be learned and understood by using Context and Metaphors.

Using real world metaphors is at the heart of making good icons. The cloud is a good example of something that has become **UNIVERSALLY UNDERSTOOD** because it relates to the physical world.

Abstract icons are risky if you are the only one using it. At TomTom we tried to use something for our service HD-TRAFFIC, this was not understood well, but through the context in which it was used users learned it. (The context was connectivity)

Universally Understood Icons are rare, when available use them never reinvent the wheel, this adds confusion

# Icons are good buttons

Icons are through their square shapes efficient buttons, especially for finger operated devices, but they also work well for most other types of User Interfaces, see the Photoshop example.

In some interfaces this is paramount, in cars for instance tiny hit area's are not allowed in UI's through EU guidelines. Big Simple Icons that are easily recognised and don't need to be read (reading costs time and effort) are paramount in an environment where the user has very little time.

Because icons are square, they are more space efficient, ideal for status updates and notifications.

# Branding

## TomTom Navigation



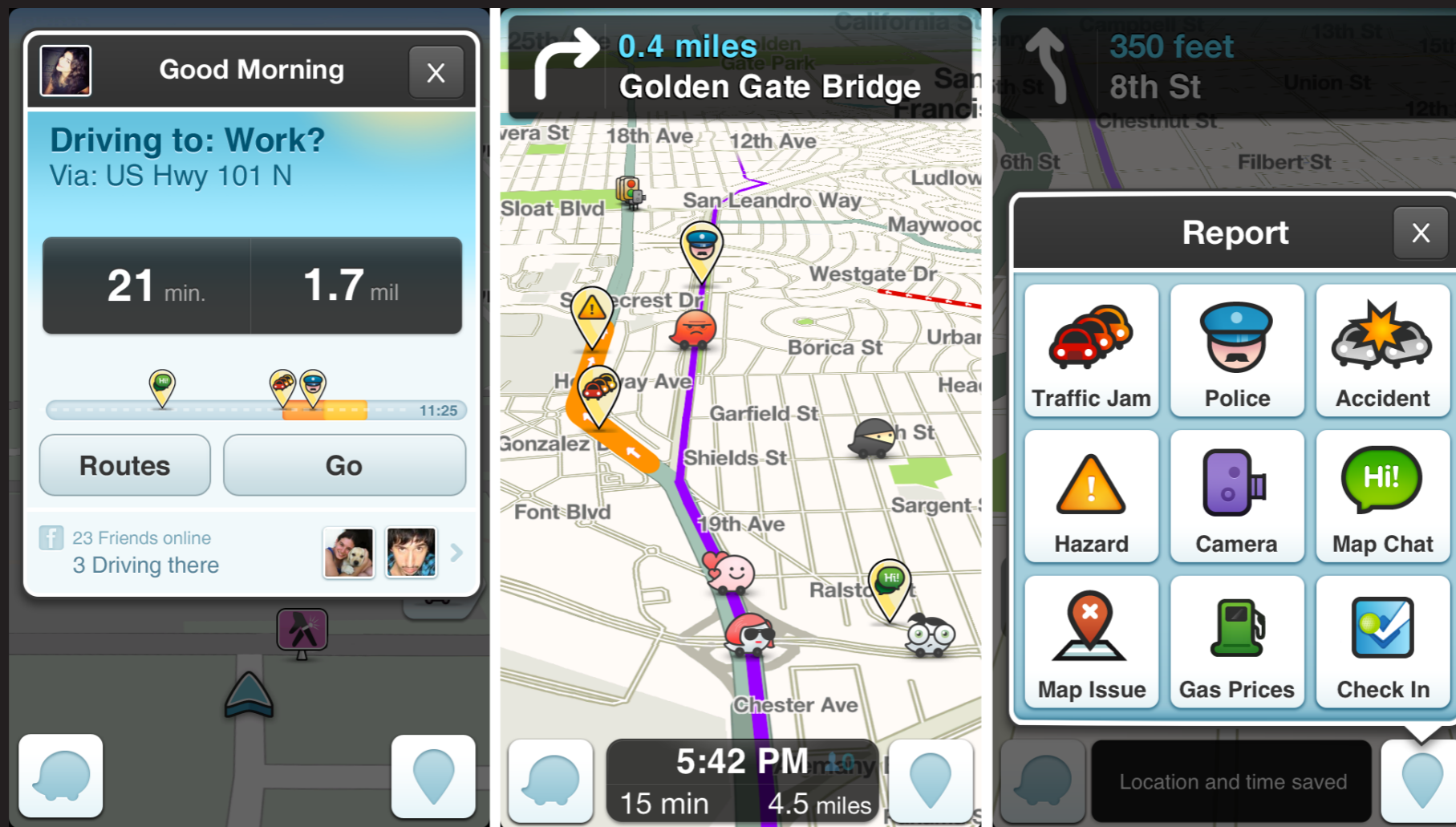
# Branding

## Garmin Navigation



# Branding

## Wayz Navigation



# When icons are mis-used

- Icons don't replace text
- Few icons are universally understood
- New icons need to be tested and learned
- Don't re-invent the wheel, use standards

# Understanding icons

Even though icons are often well recognised, they are often not well understood. When you introduce an icon substitute it with a text label.

Icon only is recognised 66% of the time.

Icon + text labels are recognised 88% of the time.

Unknown icons are recognised only 34% of the time

# Cultural differences

Some icons are difficult too use in different cultures. In the USA icons are generally less wel understood. Also colours are used less, and txt is more prevalent. This is especially obvious in traffic signs.

In Asia, Hierarchy is much less apparent, compared to European design. Everything must be colourful and overly present or else it won't used.



# First things come to mind

Don't re-invent the wheel, often the most obvious things are the best.

Use the 5 second rule to find out what the best metaphor is.

If you don't know yourself, ask around what peoples first associations are, keep is short. if more then 2 people have the same association that will be probably be the best idea.

# Understanding icons



# What's this icon?



# What's this icon?



Business park



Concert Hall



Judge



Historic site



Museum



Tennis Court



Outdoor Swimmingpool



First Aid



Dentist



Vet



Bank



Luxury hotel



Chinese restaurant



Shop



Community



Bank



Luxury hotel



Restricted area



Weighing station

# Test Attractiveness

## Attractiveness Methods

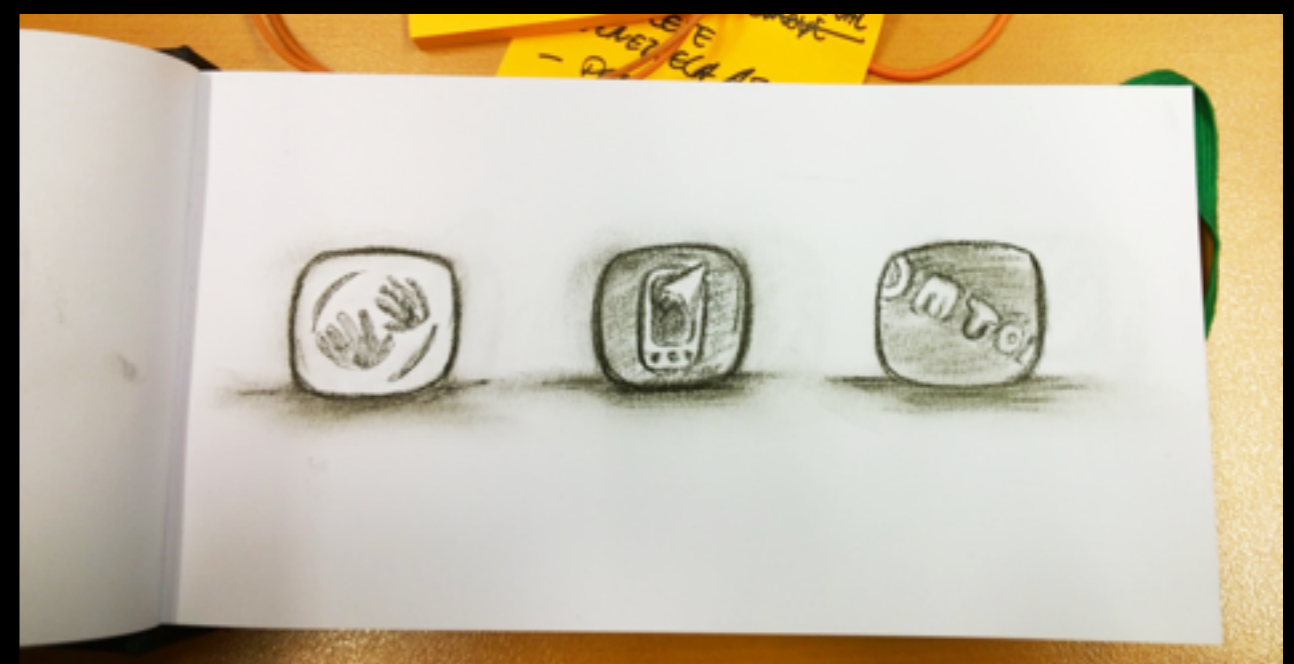
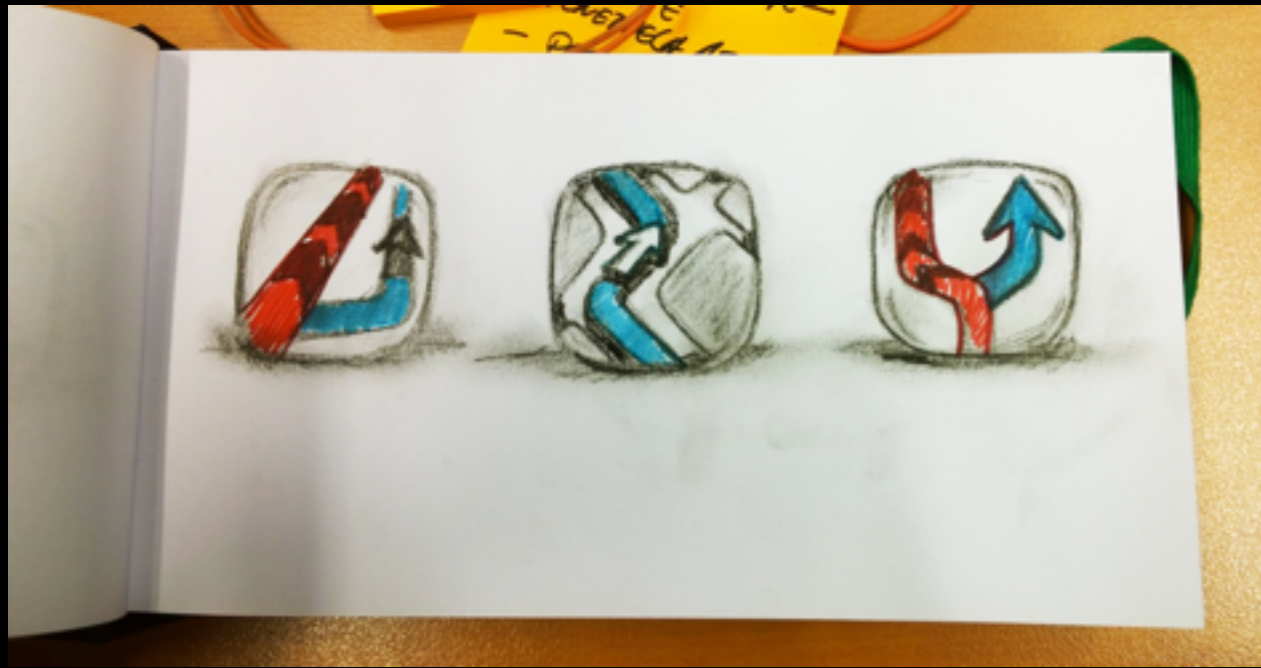
Besides testing for recognition, icons should also be tested for **attractiveness**, both individually and as part of an icon family. One of the common reasons to use icons in the first place is to add visual appeal to a design, but not all icons are equally good-looking.

The simplest attractiveness test is to ask people to score each icon on a 1–7 scale. (test attractiveness overall and for brand alignment)

If you have alternative designs of the same icon, you can also ask people to pick the most attractive from each set of alternatives and explain why they like or dislike particular images.

Finally, you can show people an entire icon family and ask them to pick out the one they like the best and the least. This last test can help you avoid the common problem where most of your icons are fine, but there are one or two less attractive ones that require a do-over to better match the aesthetic of the full design.

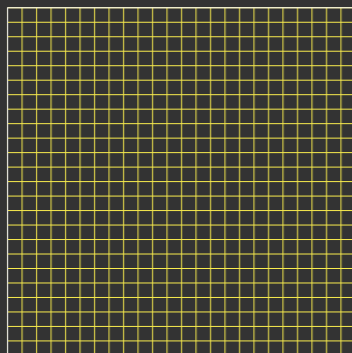
# Quick Sketching



# Work with what's given

## Control Icons

### Grid



### Grid



### Color Palette

Sienna #AE6108	Yellow #FFE321	Gold #FFB619
Orange #FF9610	Dark Orange #FF7110	Orange Red #F74921
Tomato #FF3108	TomTom Red #FF1400	Firebrick #CE0000
Dark Red #9C1819	Purple #78006B	Violet Red #8D0084
Magenta #FF00A5	Dark Magenta #6B107B	Plum #85148D
Fuschia #FF00FF	Indigo #42007B	Dark Orchid #73008D
Blue Violet #8500FF	Sapphire Blue #3A008D	Navy #08009C
Blue #2900FF	Steel Blue #1055A5	Dodger Blue #1071FF
Deep Sky Blue #08AAFF	Teal #005D73	Dark Cyan #00A28D
Cyan #00E7FF	Pine Green #006163	Light Seagreen #00AE9C
Aquamarine #00E88D	Dark Green #00654A	Medium Seagreen #00826B
Spring Green #08F384	Green #007110	Lime Green #008E08
Lime #08FF00	Forest Green #52B208	Lawn Green #84F310
Olive Drab #7BAA21	TomTom Green #8D0731	Green Yellow #D6FF00
Black #000000	Mid Grey #787878	White #FFFFFF

### Typography: Font-family

Frutiger Next Condensed Regular (FrutigerNext-RegularCn.ttf)

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz

Frutiger Next Condensed Medium (FrutigerNext-MediumCn.ttf)

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz

Frutiger Next Condensed Bold (FrutigerNext-BoldCn.ttf)

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz

Frutiger Next Condensed Heavy (FrutigerNext-HeavyCn.ttf)

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz

### Typographic Scale

Text Size Micro	15 dp
Text Size Small	20 DP
Text Size Medium	25 dp
Text Size Big	30 dp
Text Size Large	35 dp
Text Size Extra-Large	38 dp

# Types of Icons

1. **Menu/Dashboard Icons**  
(Introducing functionality's, guiding to specific screens)
2. **Control icons**  
(Notification, play, next, submit)
3. **Map Icons**  
(on any background)
4. **List Icons**

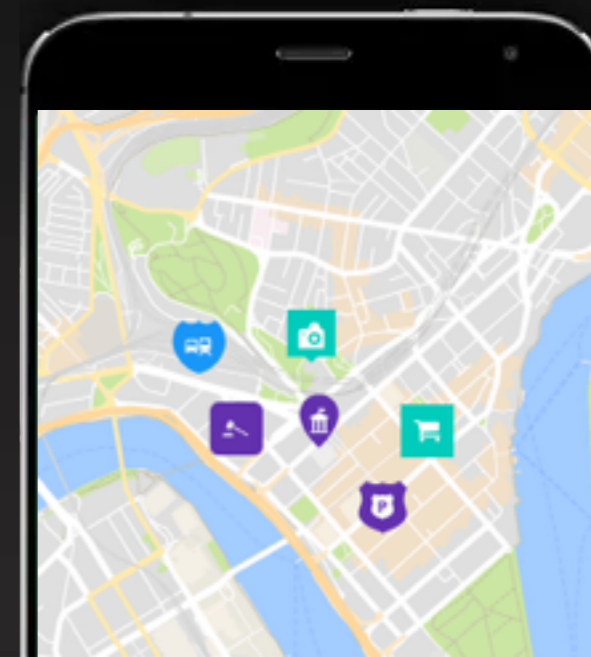
2 & 4



1.



3.





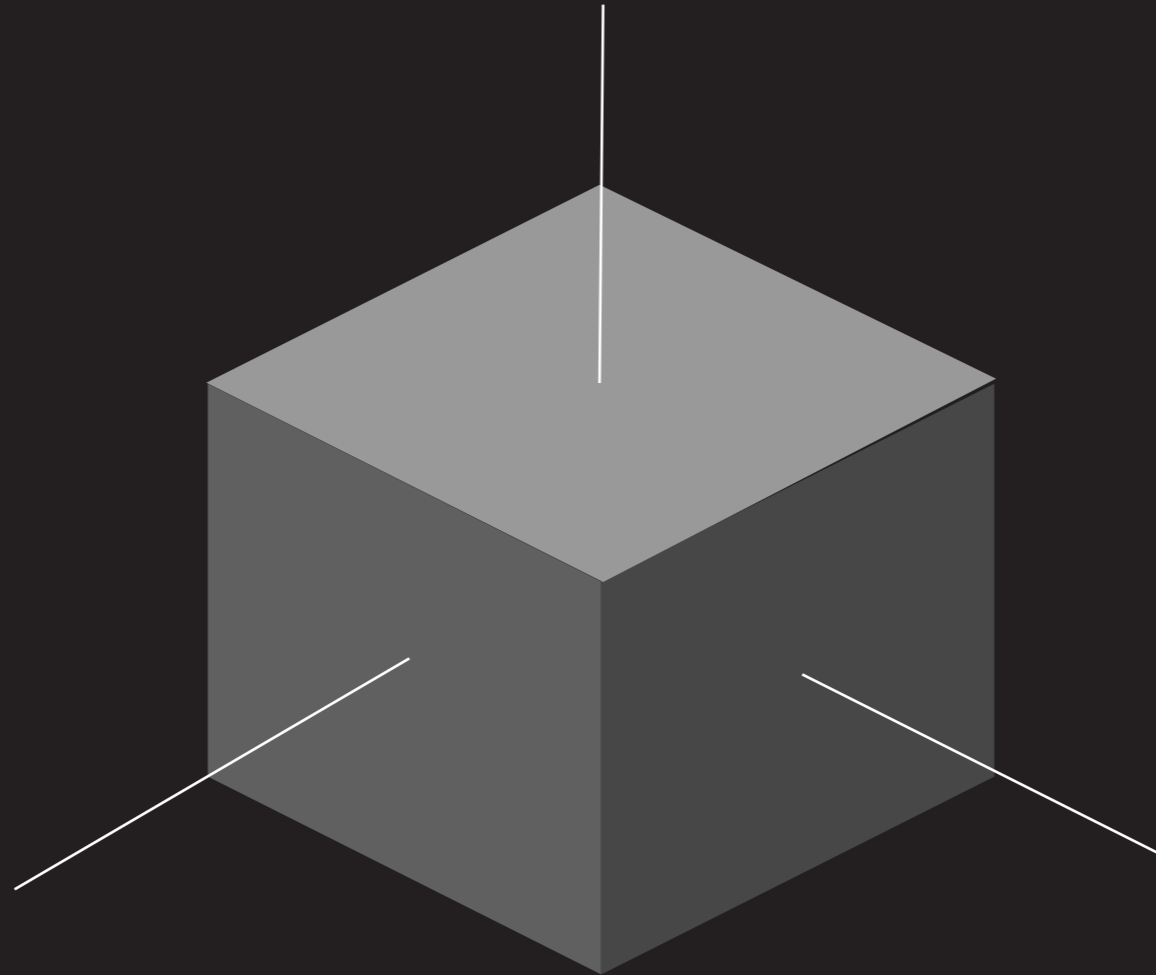
# Types of icons

cds

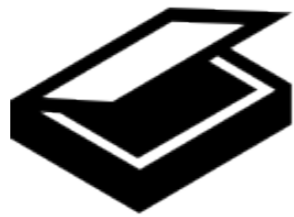
# Styles

- Skeuomorphism (semi-real)
- Isometric
- Flat ( Windows Metro )
- Comic / Gaming / 3D

# Isometric



# Isometric icons



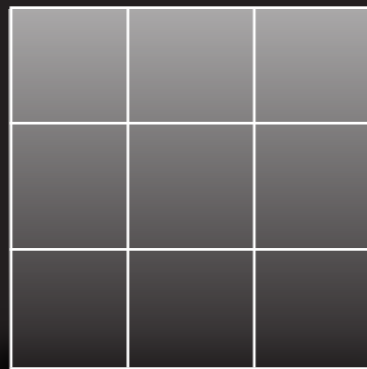
# Isometric icons



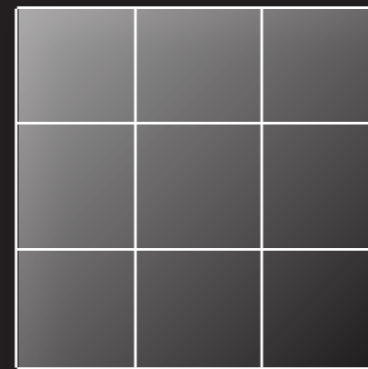
# Isometric icons



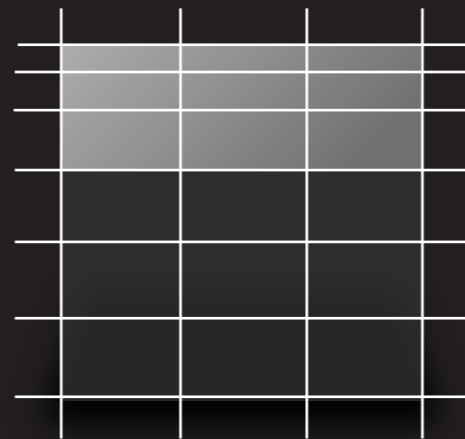
# Skeuomorphism



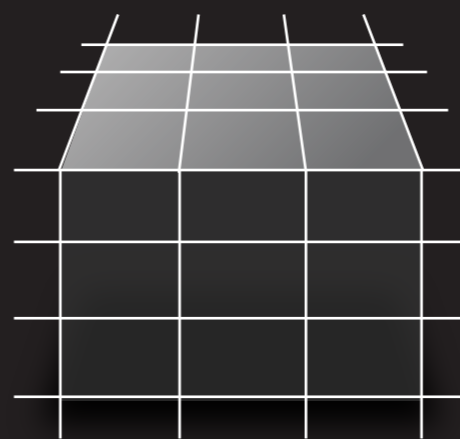
Frontal



Top



Forced Perspective



Perspective

# Skeuomorphic icons





# Skeuomorphic icons



# TomTom Menu Icons

A series of icons created for TomTom inspired upon the then going style of icons for the Iphone IOS and expanded, developed and managed further by me for several TomTom navigation products.

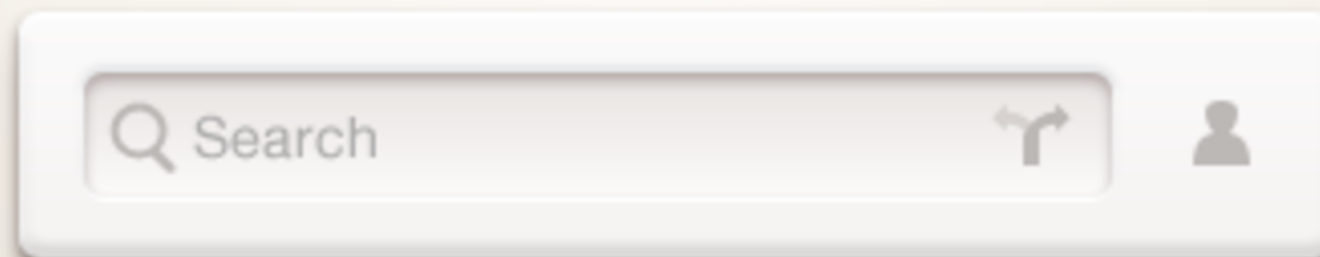


# Skeuomorphic UI



Google Maps

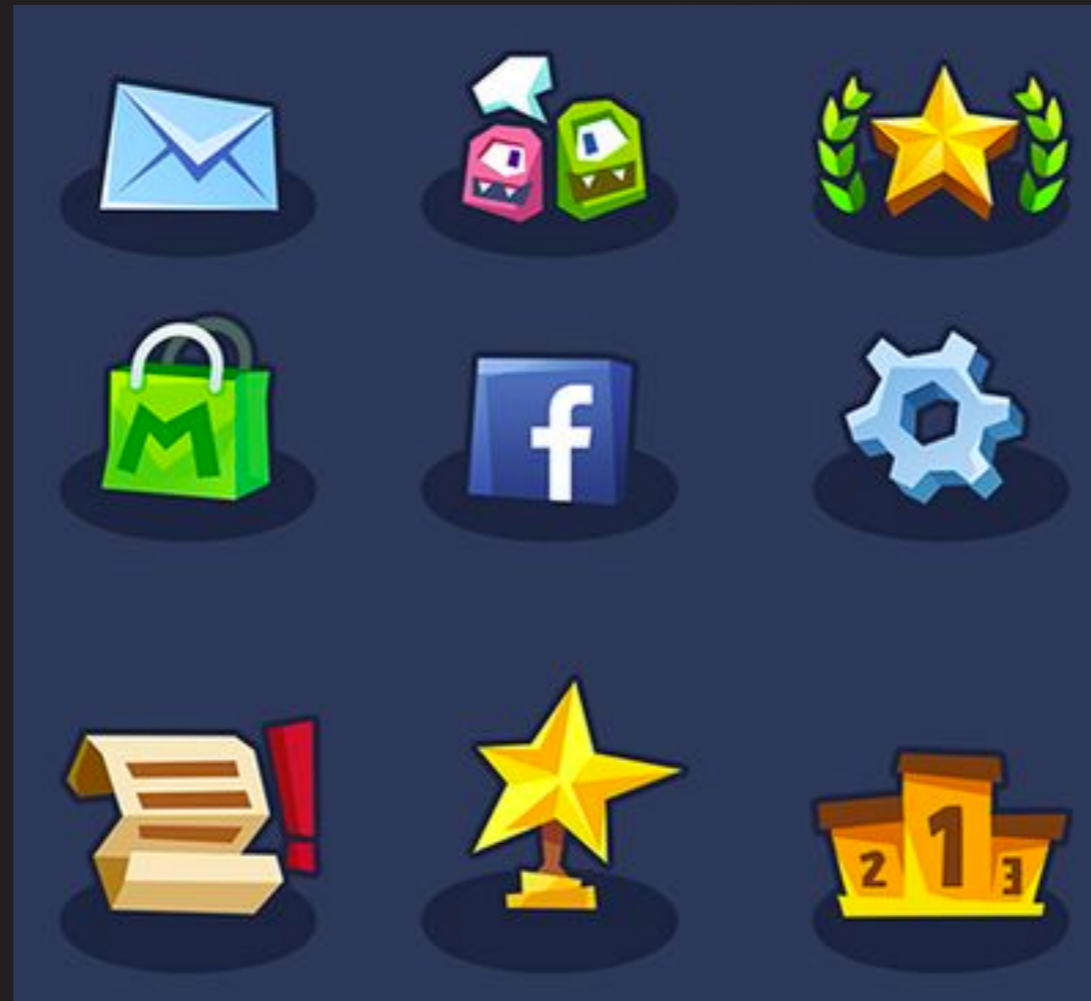
Google Maps app redesign for iOS



# Various styles



# Various styles



# Various styles



# Material Design

Shadow  
direction  
45 deg



Top

# Material Design icons



Calculator



Calendar



Camera



Chrome



Clock



Contacts



Docs



Downloads



Drive



Earth



Email



Fit



# Material Design icons



# Material Design icons

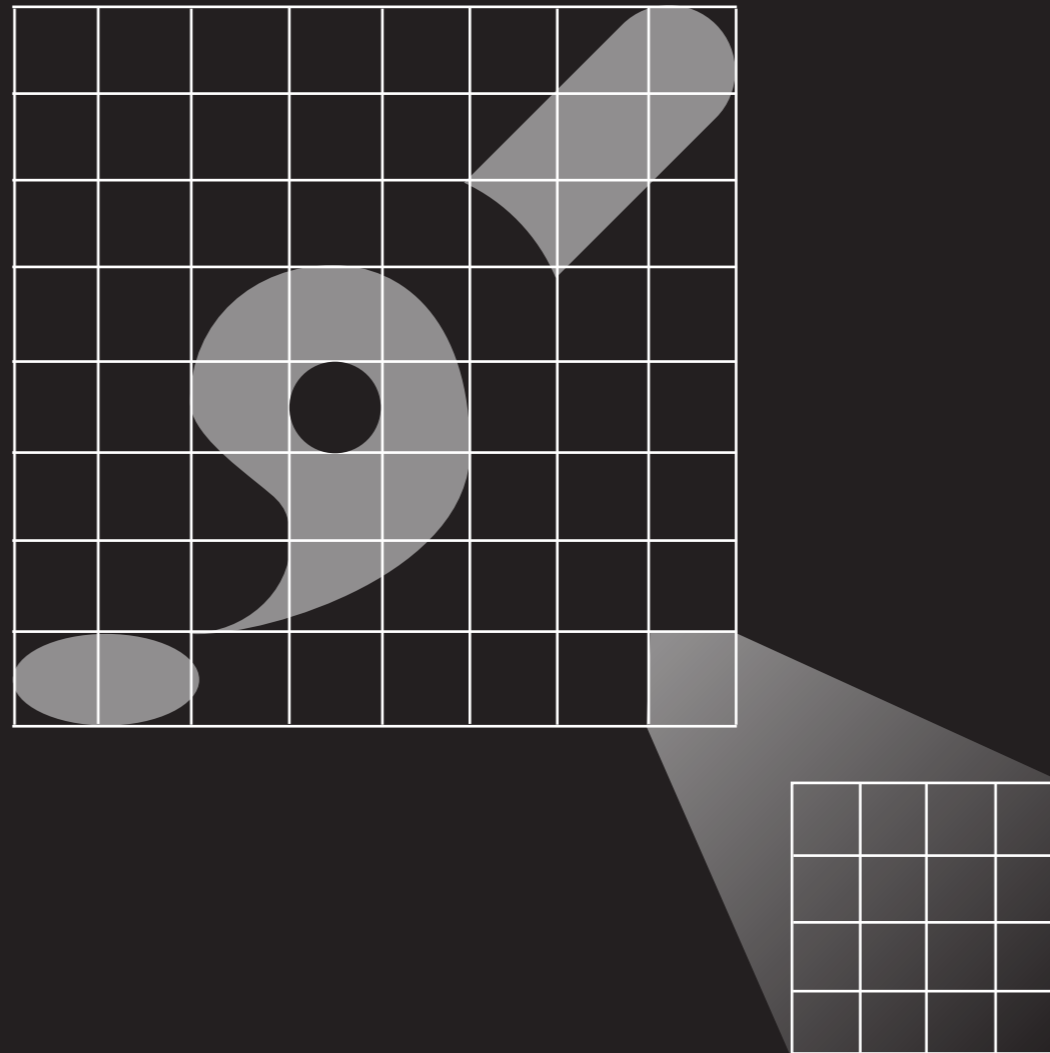


Do.



Don't.

# Metro Style Icons



# Metro Style Icons



# Metro Style Icons



Avoid  
Roadblock



Night Drive



Recent  
Destinations



My Motor  
Vehicle

# Metro Style Icons



Device



Interface



Location



Creation



Value  
Capture



Formats



When



With  
Whom



Length



Values



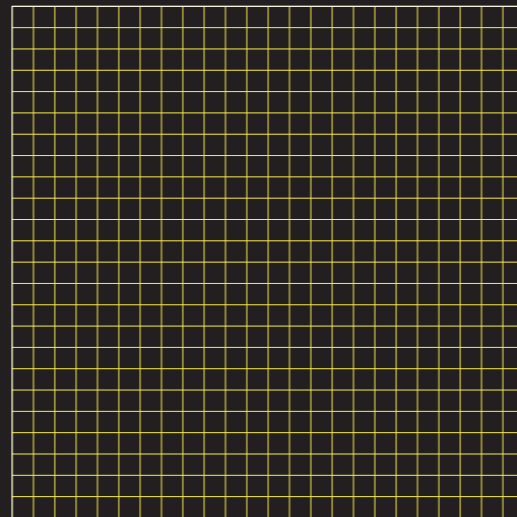
Trusted  
Source



Generations

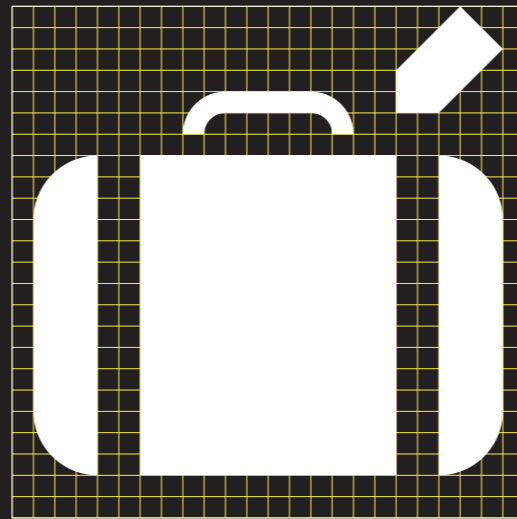
# Building an Icon system

Grid



# Create an icon

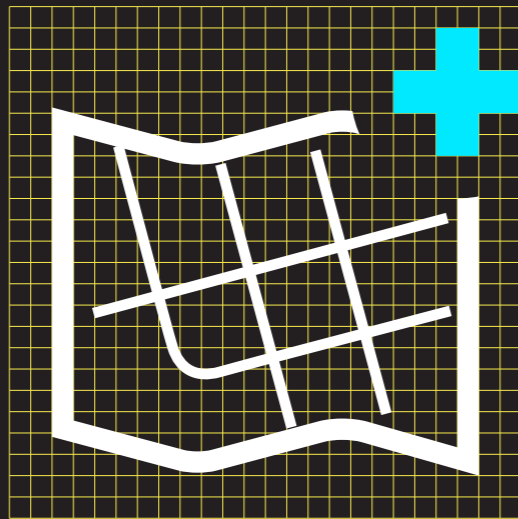
Apps



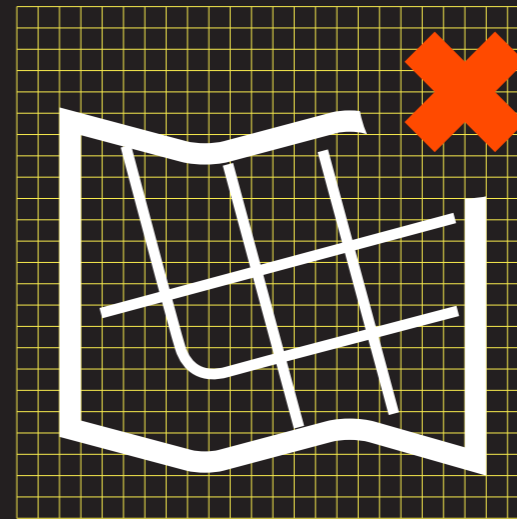


# Status options

Add

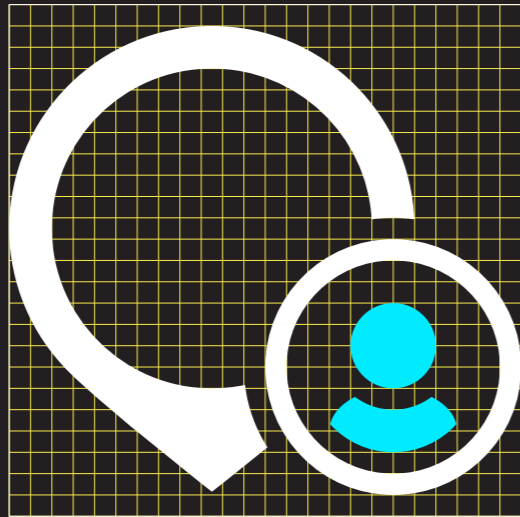


Delete

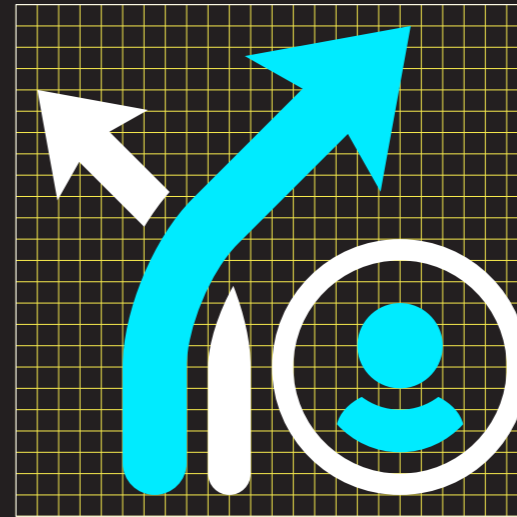


# Grouping Topics

My places

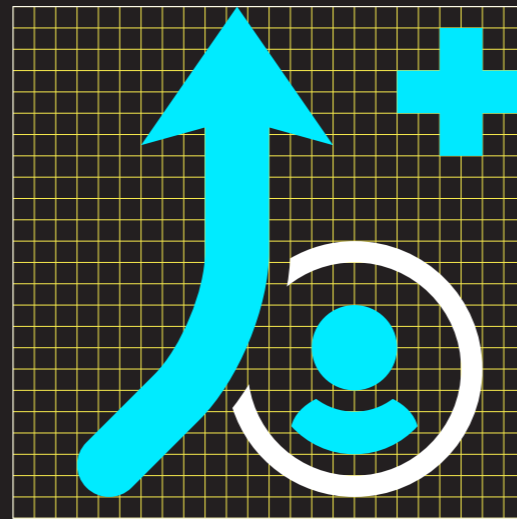


My routes



# Combining Elements

Add to  
my routes





Toggle



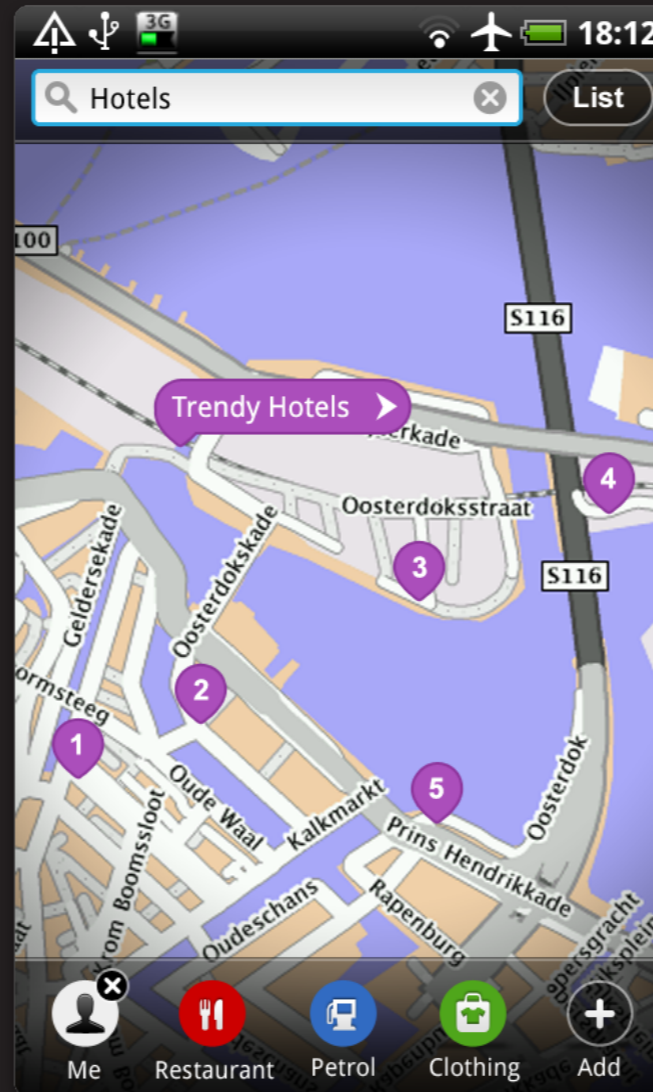
Leave  
page



# Examples

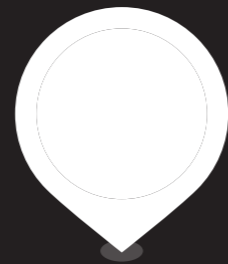


# Map Icons



TomTom Places

# Map Containers



My Restaurant

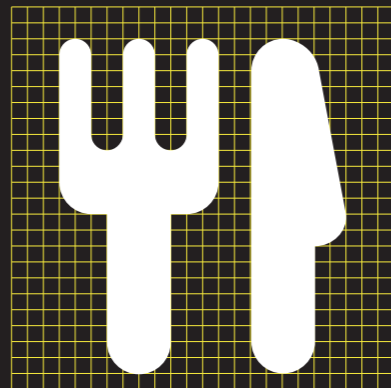
Hot Food

Normal















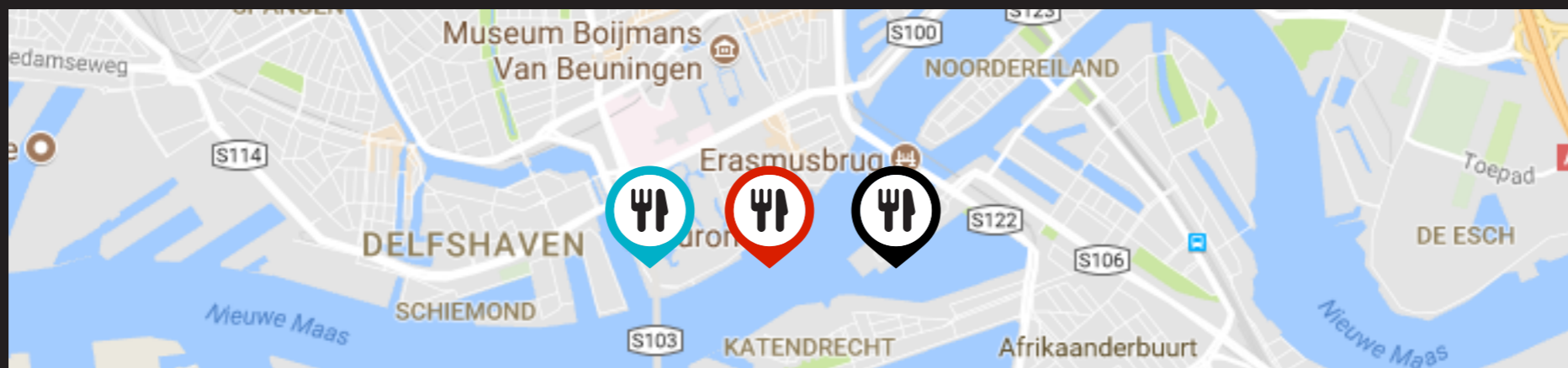
# Map Icons

restaurant



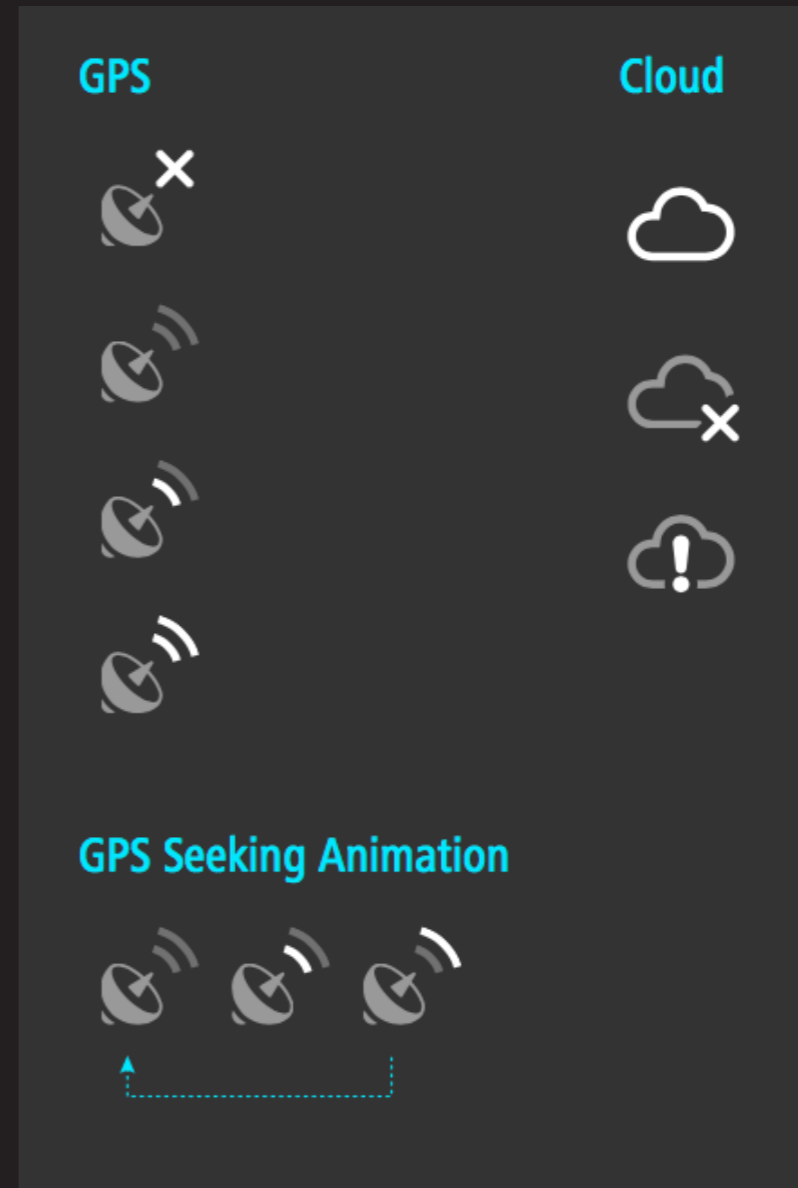
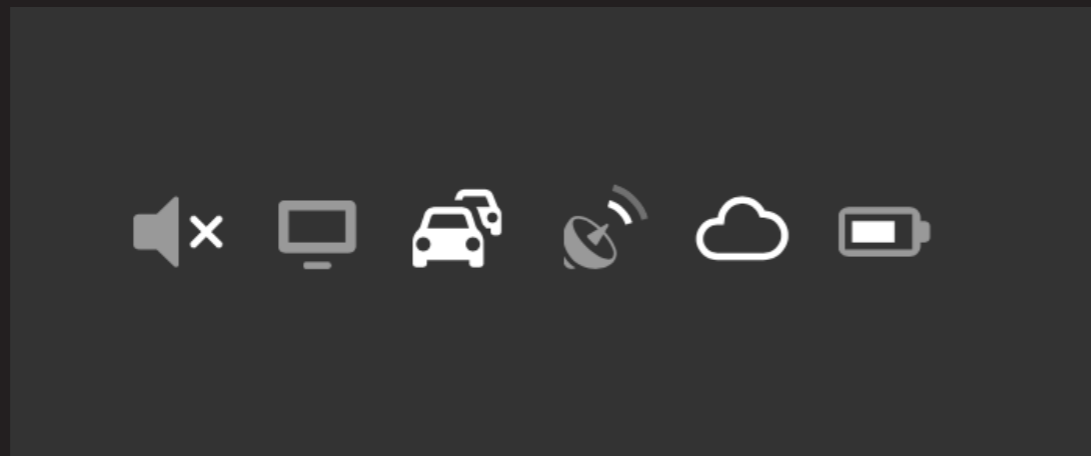
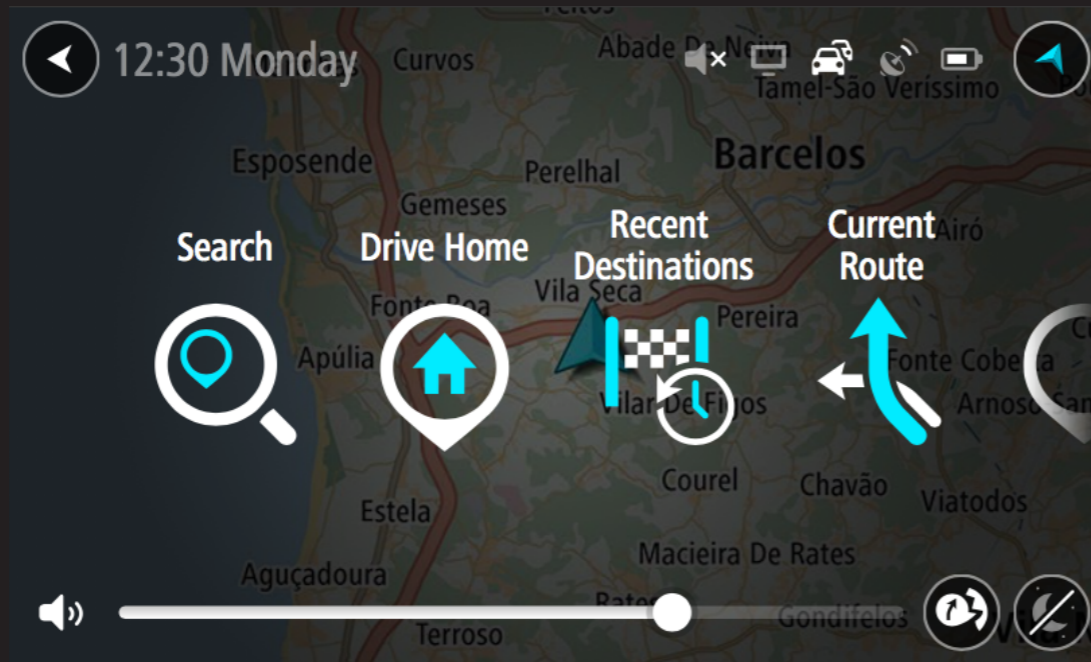
POI Colors per category

			
ATM	Fashion	Coiffeur	Hotel
			
Parking	Lounge	Restaurant	Shoes
			
My position	Add Category	Supermarket	Petrol





# Control Icons



- Don't use (excess) color (this reserved for the main icons)



THINK