

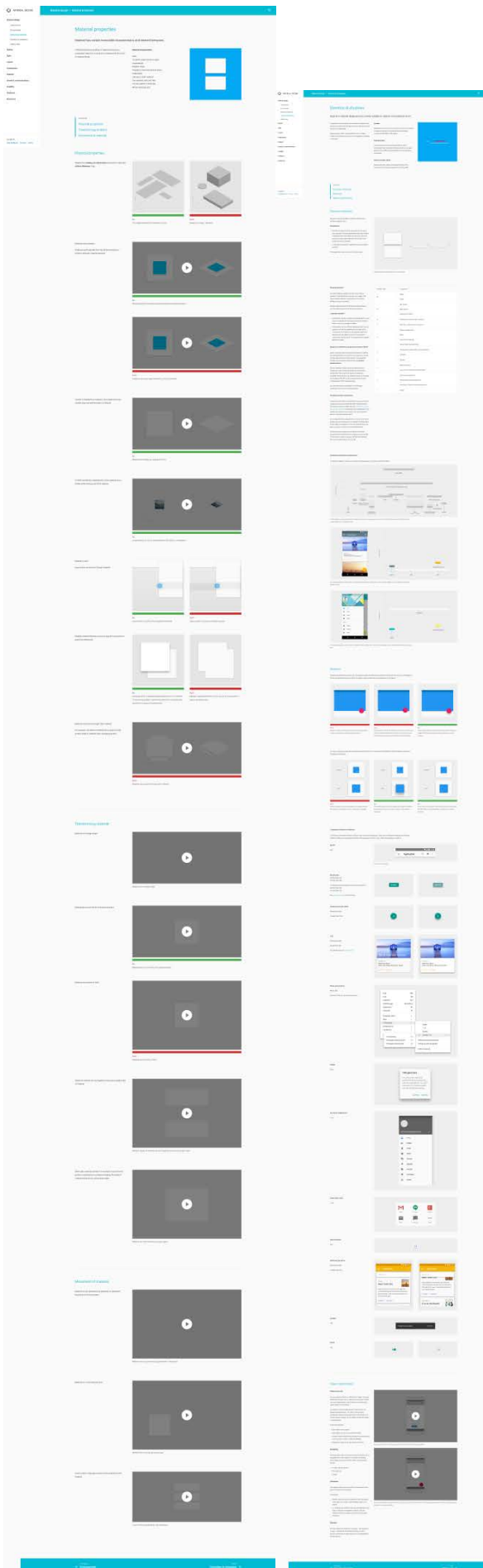
Material design	Ansvarlig	KIHK
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	Side	1 af 3
Projekt: 7438, Tjek økonomien – Styrk bundlinjen		

## Material design

Vi har i udviklingen af dette værktøj, valgt at benytte de designregler der forbindes med det visuelle udtryk "Material design". Dette udtryk er udviklet af google, og hjælper til at udforme stilrene og overskuelige produkter.

Material design er grundregler, som kan flettes med brands eksisterende design. Vi kan derfor blande disse regler med SEGES eget design, og skabe et egenartet udtryk på tværs af programmer og platforme. Denne type designer ligeledes brugt i forbindelse med redesign af landmandsportalen "www.landmand.dk".

For den fulde guide omkring "material design", se da: <https://material.io/guidelines/material-design/introduction.html>



MATERIAL DESIGN
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# Material design

Introduction
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## Introduction

Material design - Introduction
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We challenged ourselves to create a visual language for our users that synthesizes the classic principles of good design with the innovation and possibility of technology and science. This is material design. This spec is a living document that will be updated as we continue to develop the tenets and specifics of material design.

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**Goals**

Create a visual language that synthesizes classic principles of good design with the innovation and possibility of technology and science.

Develop a design-enabling system that allows for a unified experience across platforms and device sizes. Make general and fundamental technical, color, motion, and layout use as all first-class input methods.

**Principles**

**Material in the metaphor**

A tactile metaphor in the writing form of a sequential space and a tactile interface. The design is grounded in tactile reality inspired by the study of paper and ink, pen technology and material and space in typography and design. Surface and edges of the material provide visual cues that are grounded in reality. The use of borders to define depth and space creates a sense of three-dimensionality. The backdrop of the material creates an effect of depth and space from the physical world, allowing the user to interact with the design in a tactile way.

The combination of light, shadow, and movement are key to conveying that objects exist, interact, and react in space and respond to user input. Material design uses these elements, motion, space, and a tactile writing form.

**Bold graphics, intentional**

The foundational elements of good design: simplicity, clarity, space, scale, color, and ease of use – guide visual treatment. These elements are for more than good design. They create meaning, clarity, and focus. Bold graphics create clarity, ease of design, and provide a sense of direction and intention. The use of bold graphics creates a sense of direction and intention. An emphasis on color creates a sense of direction and intention. An emphasis on color creates a sense of direction and intention. An emphasis on color creates a sense of direction and intention.

**Motion provides meaning**

Motion respects and enhances the user. The path is clear. Motion is not just a decorative element, but a key element in conveying the user's intent. Motion is not just a decorative element, but a key element in conveying the user's intent. Motion is not just a decorative element, but a key element in conveying the user's intent.

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Environment

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## Environment

Material design is a three-dimensional environment containing light, material, and cast shadows.

All material objects have x, y, and z dimensions.

### Material thickness

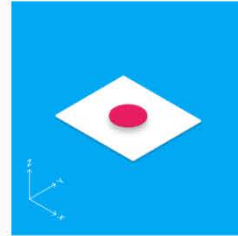
1dp

All material objects have a single z-axis position.

Key lights create directional shadows, and ambient light creates soft shadows.

### Shadows

Shadows are created by the elevation difference between overlapping material.



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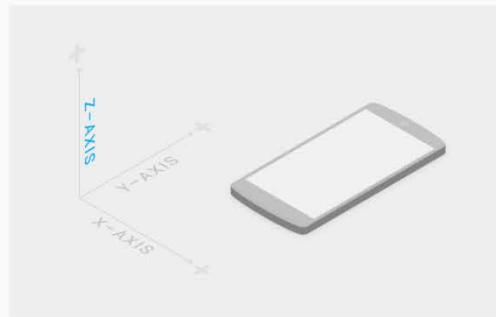
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## 3D world

The material environment is a 3D space, which means all objects have x, y, and z dimensions. The z-axis is perpendicularly aligned to the plane of the display, with the positive z-axis extending towards the viewer. Every sheet of material occupies a single position along the z-axis and has a standard 1dp thickness, equivalent to [one pixel of thickness](#) on screens with a pixel density of 160.

On the web, the z-axis is used for layering and not for perspective. The 3D world is emulated by manipulating the y-axis.

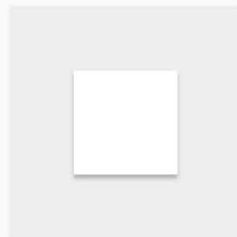


3D space with x, y, and z axes

## Light and shadow

Within the material environment, virtual lights illuminate the scene. Key lights create directional shadows, while ambient light creates soft shadows from all angles.

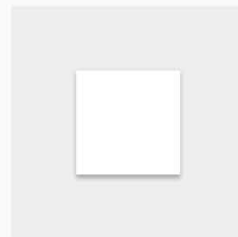
Shadows in the material environment are cast by these two light sources. In Android development, shadows occur when light sources are blocked by sheets of material at various positions along the z-axis. On the web, shadows are depicted by manipulating the y-axis only. The following example shows the card with a height of 6dp.



Shadow cast by key light



Shadow cast by ambient light



Combined shadow from key and ambient lights