

Nettet er for alle!

Universell utforming
- hvorfor og hvordan

Tom Widerøe, [FINN.no](https://finn.no)
[@twidero](https://twitter.com/twidero)

Hvem er jeg?



Tom Widerøe
Framsieutvikler og uu-predikant
FINN.no

3 barn, 1 kone, 1 katt
@twidero



Hva skal jeg prate om?

- Hva er universell utforming (uu)?
- Hvem vi må huske på
- Hvordan gjøre det riktig



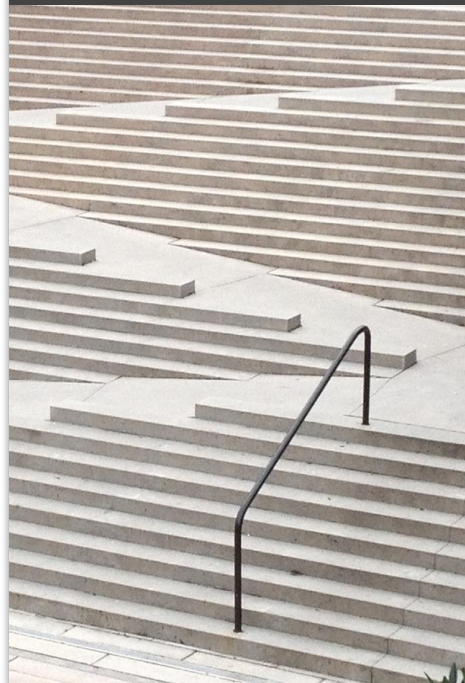
Hva er universell utforming?



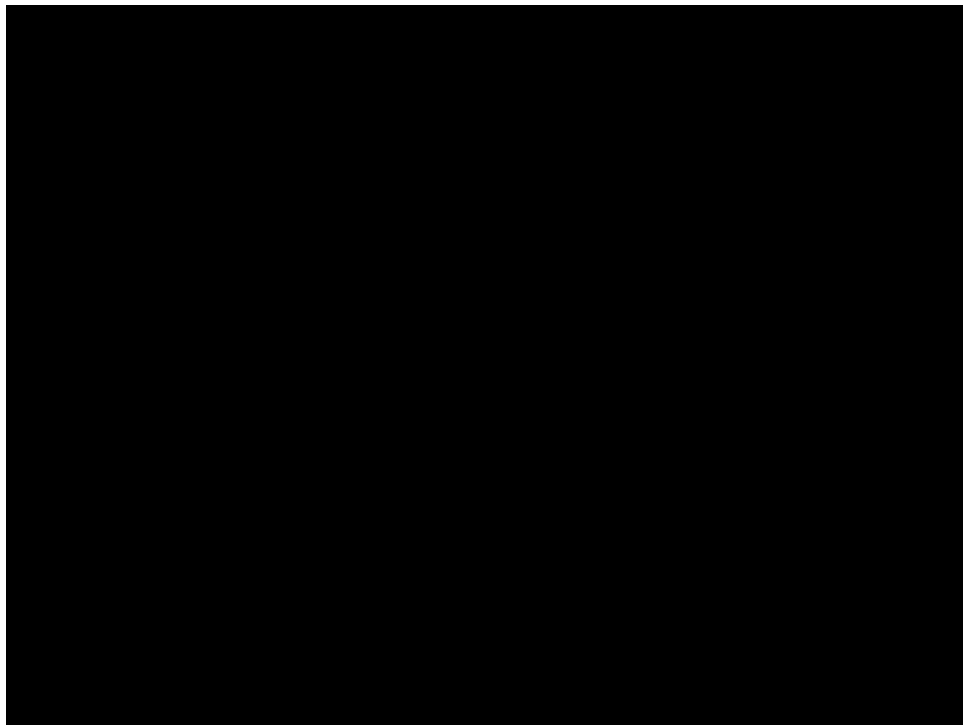
Tilgjengelighet



Universell utforming



Plagsomt for noen, umulig for andre



Universell utforming
=
Kvalitet



facebook

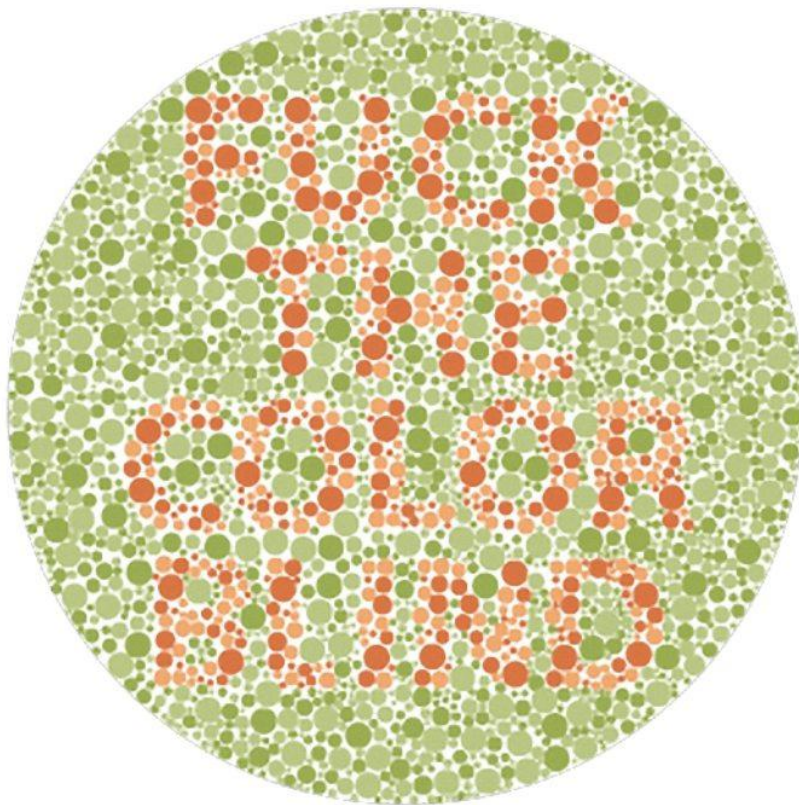
Google

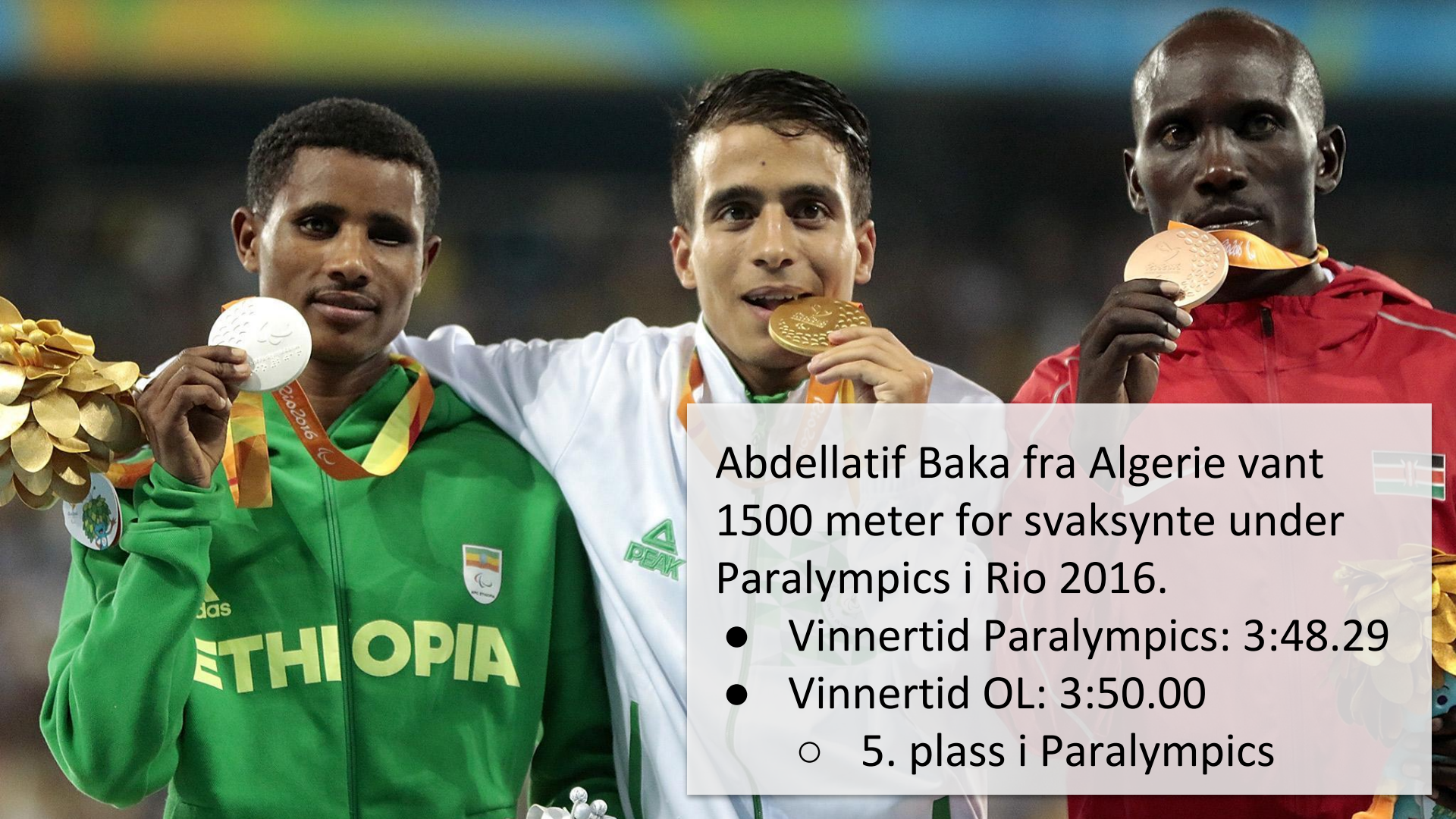
 Kolonial.no



Kahoot!

Hvem bør vi tenke ekstra på?





Abdellatif Baka fra Algerie vant 1500 meter for svaksynte under Paralympics i Rio 2016.

- Vinnertid Paralympics: 3:48.29
- Vinnertid OL: 3:50.00
 - 5. plass i Paralympics

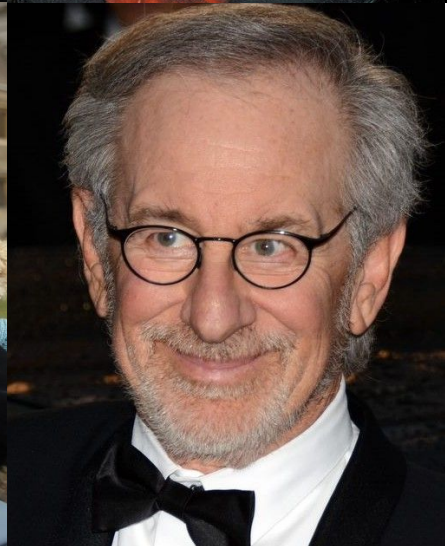
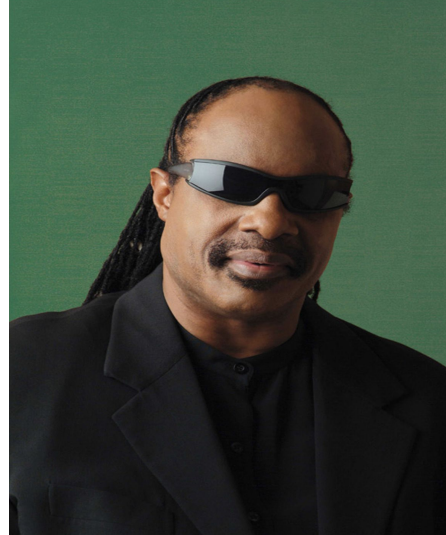
Hvem bør vi tenke ekstra på?

Synshemmede

Hørselshemmede

Bevegelseshemmede

Kognitive



Hvordan gjøre det riktig?

- Web Content Accessibility Guidelines (WCAG 2.0)
- 61 suksesskriterier, 35 lovpålagte
- uu.difi.no



WCAG 2.0 Guidelines

This section is normative.

Principle 1: Perceivable - Information and user interface components must be presentable to users in ways they can perceive.

Guideline 1.1 Text Alternatives: Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

[Understanding Guideline 1.1](#)

1.1.1 Non-text Content: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. (Level A)

[How to Meet 1.1.1](#)
[Understanding 1.1.1](#)

- **Controls, Input:** If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to [Guideline 3.1](#) for additional requirements for controls and content that accepts user input.)
- **Time-Based Media:** If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to [Guideline 1.2](#) for additional requirements for media.)
- **Text:** If non-text content is a text or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content.
- **Sensory:** If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.
- **CAPTCHA:** If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.
- **Decoration, Formatting, Invisible:** If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.

Guideline 1.2 Time-based Media: Provide alternatives for time-based media.

[Understanding Guideline 1.2](#)

1.2.1 Audio-only and Video-only (Pre-recorded): If or pre-recorded audio-only and pre-recorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such. (Level A)

[How to Meet 1.2.1](#)
[Understanding 1.2.1](#)

- **Pre-recorded Audio-only:** An alternative for time-based media is provided that presents equivalent information for pre-recorded audio-only content.
- **Pre-recorded Video-only:** Either an alternative for time-based media or an audio track is provided that presents equivalent information for pre-recorded video-only content.

1.2.2 Captions (Pre-recorded): Captions are provided for all pre-recorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A)

[How to Meet 1.2.2](#)
[Understanding 1.2.2](#)

1.2.3 Audio Description or Media Alternative (Pre-recorded): An alternative for time-based media or audio description of the pre-recorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A)

[How to Meet 1.2.3](#)
[Understanding 1.2.3](#)

1.2.4 Captions Live: Captions are provided for all live audio content in synchronized media. (Level AA)

[How to Meet 1.2.4](#)
[Understanding 1.2.4](#)

1.2.5 Audio Description (Pre-recorded): Audio description is provided for all pre-recorded video content in synchronized media. (Level AA)

[How to Meet 1.2.5](#)
[Understanding 1.2.5](#)

1.2.6 Sign Language (Pre-recorded): Sign language interpretation is provided for all pre-recorded audio content in synchronized media. (Level AA)

[How to Meet 1.2.6](#)
[Understanding 1.2.6](#)

1.2.7 Extended Audio Description (Pre-recorded): Where present in background audio, are sufficient to allow audio descriptions to convey the content of the video, extended audio description is provided for all pre-recorded video content in synchronized media. (Level AA)

[How to Meet 1.2.7](#)
[Understanding 1.2.7](#)

1.2.8 Media Alternative (Pre-recorded): An alternative for time-based media is provided for all pre-recorded synchronized media and for all pre-recorded video-only media. (Level AA)

[How to Meet 1.2.8](#)
[Understanding 1.2.8](#)

1.2.9 Subtitled Live: An alternative for time-based media that presents equivalent information for live audio-only content is provided. (Level AA)

[How to Meet 1.2.9](#)
[Understanding 1.2.9](#)

Guideline 1.3 Adaptation: Create content that can be presented in different ways (for example, simpler, more detailed, or more visual) without losing information or structure.

[Understanding Guideline 1.3](#)

1.3.1 Info and Relationships: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.1](#)
[Understanding 1.3.1](#)

1.3.2 Meaningful Structure: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.2](#)
[Understanding 1.3.2](#)

1.3.3 Semantic Classification: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.3](#)
[Understanding 1.3.3](#)

1.3.4 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.4](#)
[Understanding 1.3.4](#)

1.3.5 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.5](#)
[Understanding 1.3.5](#)

1.3.6 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.6](#)
[Understanding 1.3.6](#)

1.3.7 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.7](#)
[Understanding 1.3.7](#)

1.3.8 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.8](#)
[Understanding 1.3.8](#)

1.3.9 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.9](#)
[Understanding 1.3.9](#)

1.3.10 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.10](#)
[Understanding 1.3.10](#)

1.3.11 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.11](#)
[Understanding 1.3.11](#)

1.3.12 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.12](#)
[Understanding 1.3.12](#)

1.3.13 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.13](#)
[Understanding 1.3.13](#)

1.3.14 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.14](#)
[Understanding 1.3.14](#)

1.3.15 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.15](#)
[Understanding 1.3.15](#)

1.3.16 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

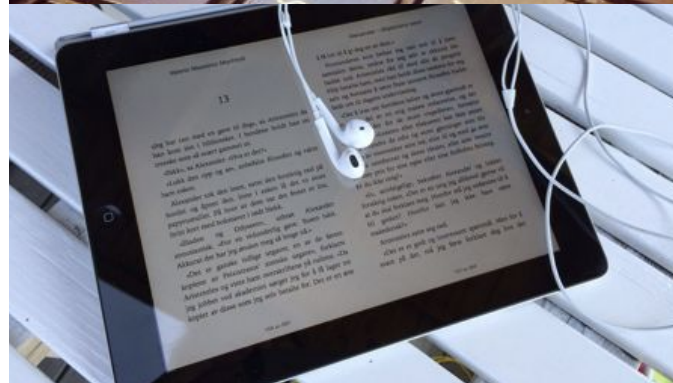
[How to Meet 1.3.16](#)
[Understanding 1.3.16](#)

1.3.17 Content Organization: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

[How to Meet 1.3.17](#)
[Understanding 1.3.17](#)

Morsommere å teste selv

- Sugerørstesten
- Tastenavigasjon
- Skjermleser



Sugerørstesten

DRØBAK - FAMILIEBOLIG MED VANNBÅREN VARME OG SMIDIG UNDERETASJE

Belsjøveien 56, 1445 Drøbak

Prisantydning 5 950 000,-

Verditakst	6 400 000,-
Kommunale avg.	10 000,-
Lånetakst	5 600 000,-

Se kjøpsomkostninger

Hva er denne søgt for tidligere?

Pris på lån

Pris på forsikring

Prisnærhet	206 m²
Bruksareal	286 m²
Soverom	5
Bruttoareal	317 m²
Boligtype	Enebolig
Eieform	Eier (Selveier)
Tommeareal	1 209 m²
Byggelår	1966
Festeavgift	2 658,-
Energienerkling	7

Fasiliteter

Balkong/Terrasse, Kabel-TV, Røt, Sentralt, Barnevennlig, Pelsliddet, GarasjeP-plass, Golfbane, Bredbåndslinje, Turfeller, Moderne, Hage, Parkett, Offentlig vann/lokk, Utsett.

Innhold

I hjertet av golfbanen ligger en liten oase med fredfulle eneboliger. Området er kjent for sitt etablerte miljø, der de fleste har boende i dette attraktive området. Eneboligen er romslig og ble totalt ombygget i 1999 med de beste materialer. Mye av dette er godt bevart - men flere funksjoner i huset kan med rette bli byttet ut de nærmeste årene. Materialene som ble gjort har vært og er fortsatt vedlikeholdt. Dette kan være nettopp det som gir en liten familie den



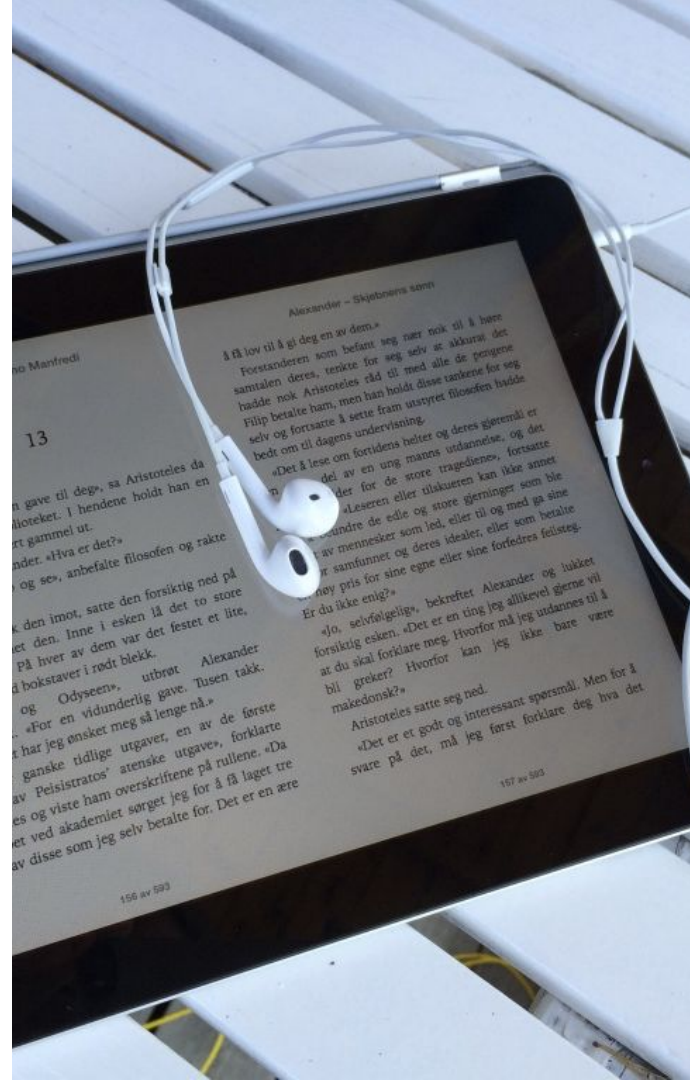
Tastenavigasjon

Alt skal funke uten å bruke mus



Skjermleser

La maskinen lese for deg




Skjermleser - før og etter test



finn Mulighetenes marked Siste nytt Ny annonse Varslinger Min FINN

Flytt til arkiv Slett

 **Roar Johansen**
Volkswagen Touran 1,9 TDI 2007, 129 633 km, kr 72 043,-

1 måned siden test kontakt selger fra Lotte logget inn

1 måned siden

Hei, Lotte. Jeg fikk "mailadressen" din fra han andre Roar. Han på G :)
Hilsen han Roar. Han på Hot.

1 måned siden

Svar til Roar 1 eller 2? :-)
Hilsen Lotte
Sent from my iPhone



1 måned siden

(epost skjult av FINN.no). Via mail.

1 måned siden

Den eposten ble skjult av FINN... :-/
Sent from my iPhone

FINN Mulighetenes marked Varslinger 25 Ny annonse Meldinger Min FINN

 **Roar Johansen**  Volkswagen Touran 1,9 TDI 2007, 129 633 km, kr 72 043,-
Ønsker 72043 kr

Sendt av deg, 3 år siden

test kontakt selger fra Lotte logget inn

Sendt av Roar Johansen, 3 år siden

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(epost skjult av FINN.no). Via mail.

Sendt av deg, 3 år siden

Den eposten ble skjult av FINN... :-/
Sent from my iPhone



Hovedregel: gjør det enkelt både for deg selv og brukeren

`<div class="button">`

- Skal se ut som en knapp
- Skal oppføre seg som en knapp
- Skal vise riktig musepeker
- Skal brukes fra tastaturet
- Skjermleser skal vite at det er en knapp
- +++

`<button>`

- Ferdig

Vil du vite mer?



Universell utforming av websider og IKT - Beste praksis



web-a11y.slack.com



[#a11y](https://twitter.com/#a11y)



uu.difi.no

Takk for meg



@twidero



webforalle.blogspot.no

