

Responsiv webbdesign

Genom *media queries*





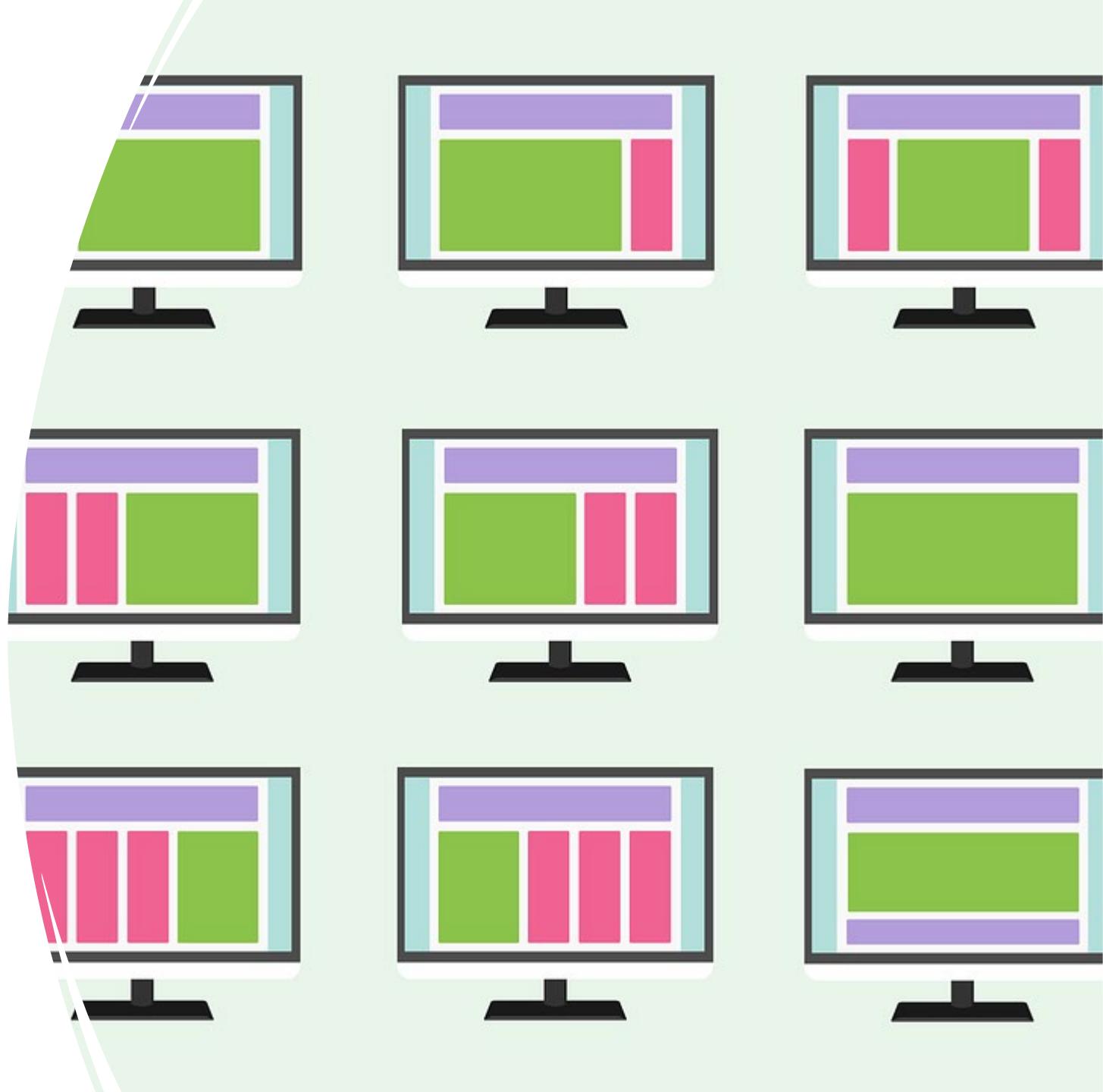
Dagens agenda

- Repetition: layout
- Vad är responsiv design?
- Media queries
- Att designa för olika enheter



CSS
IS
AWESOME

Layout

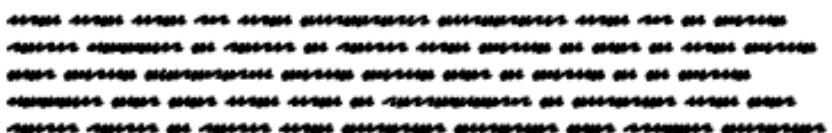
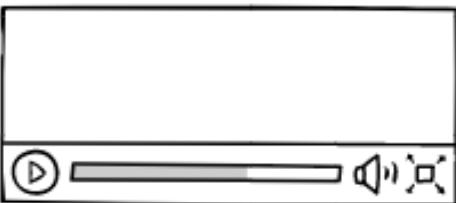
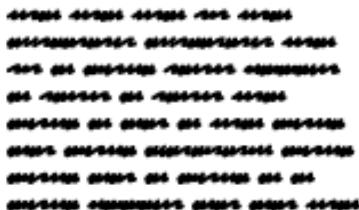




My awesome website!

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Welcome!



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption

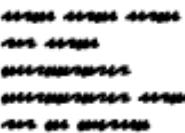


Awesome image caption

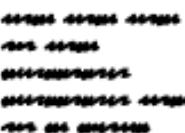


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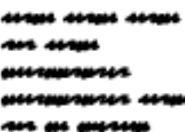
News



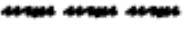
News title



News title



News title



Newsletter

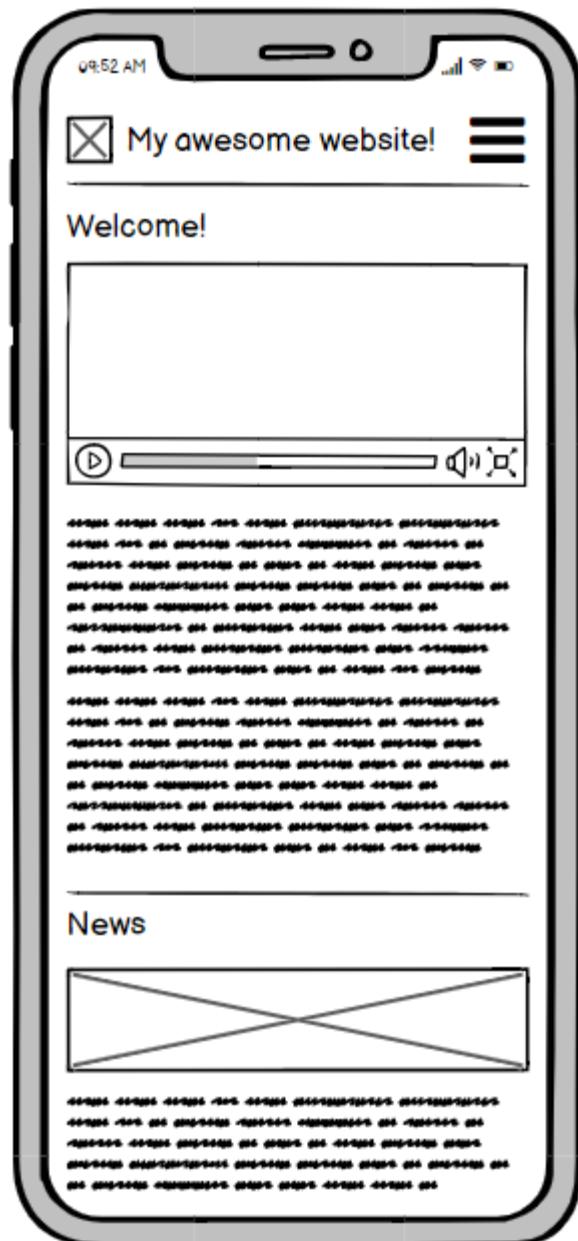
Email:

I agree!

[Subscribe](#)

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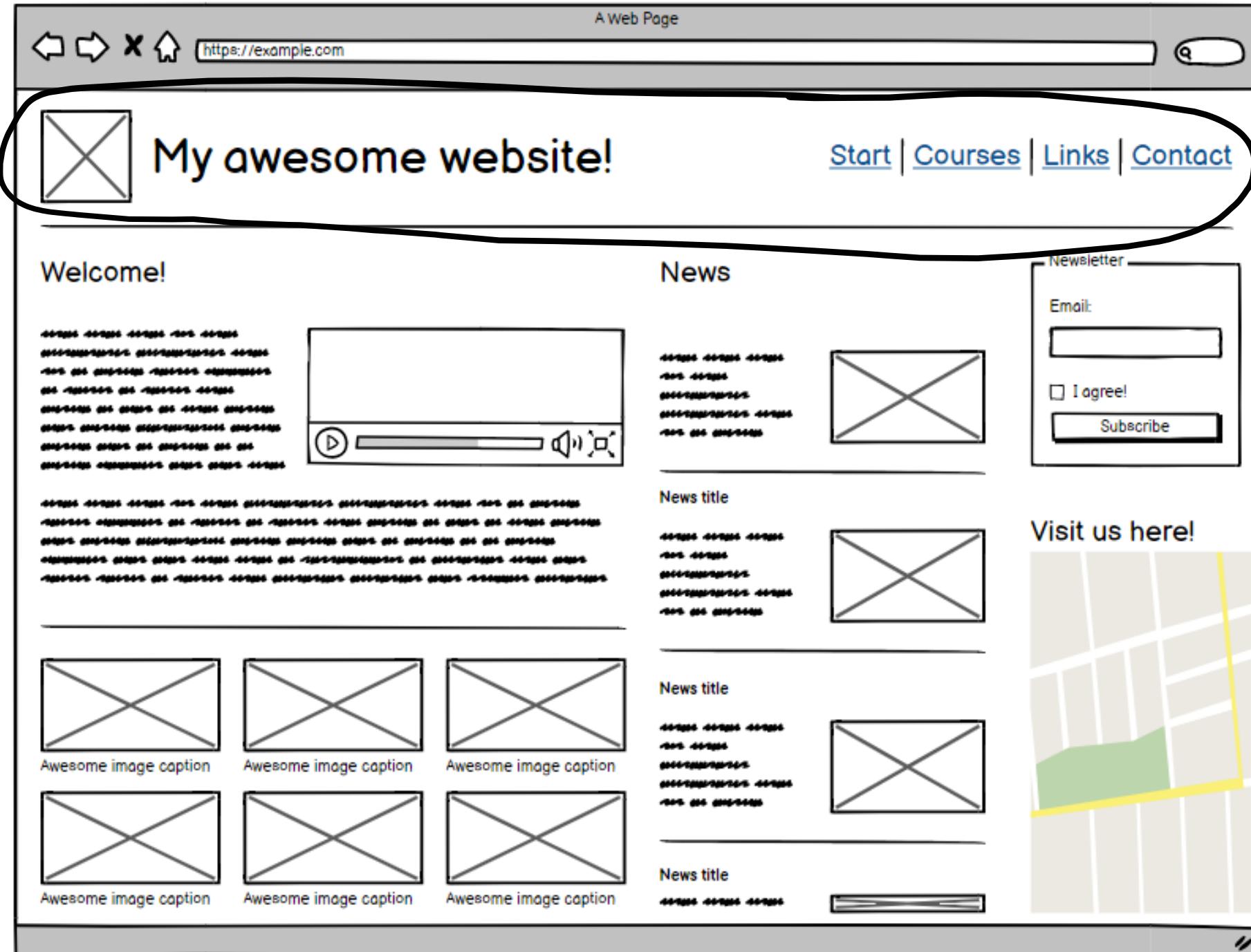
A wireframe of a web browser window titled "A Web Page" with the URL "https://example.com".

The page content includes:

- Header:** A logo icon (cross shape) followed by the text "My awesome website!" and a navigation bar with links: "Start", "Courses", "Links", and "Contact".
- Welcome Section:** The text "Welcome!" followed by two placeholder boxes for video or images.
- News Section:** The word "News" followed by three news items, each consisting of a placeholder box for an image and a placeholder box for the news title.
- Newsletter Form:** A form with fields for "Email:" (with a placeholder box), a checkbox labeled "I agree!", and a "Subscribe" button.
- Map Section:** A map with a green shaded area and a yellow border, with the text "Visit us here!" above it.

Placeholder text throughout the content areas consists of a series of short horizontal lines.

Sid huvud →

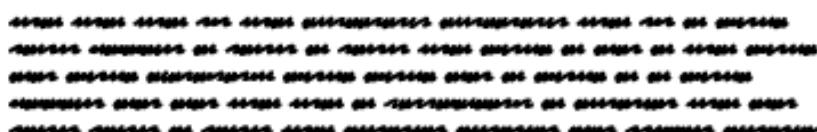
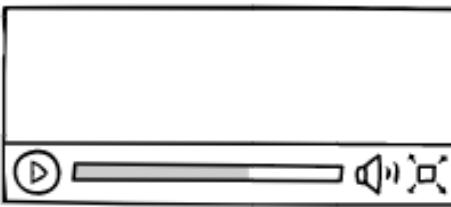
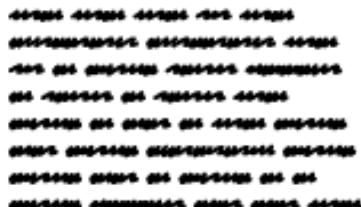




My awesome website!

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Welcome!



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption

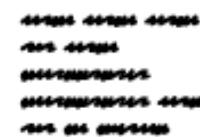


Awesome image caption

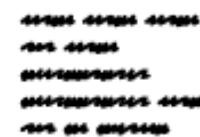


Awesome image caption

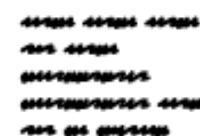
News



News title



News title



News title



Newsletter

Email:

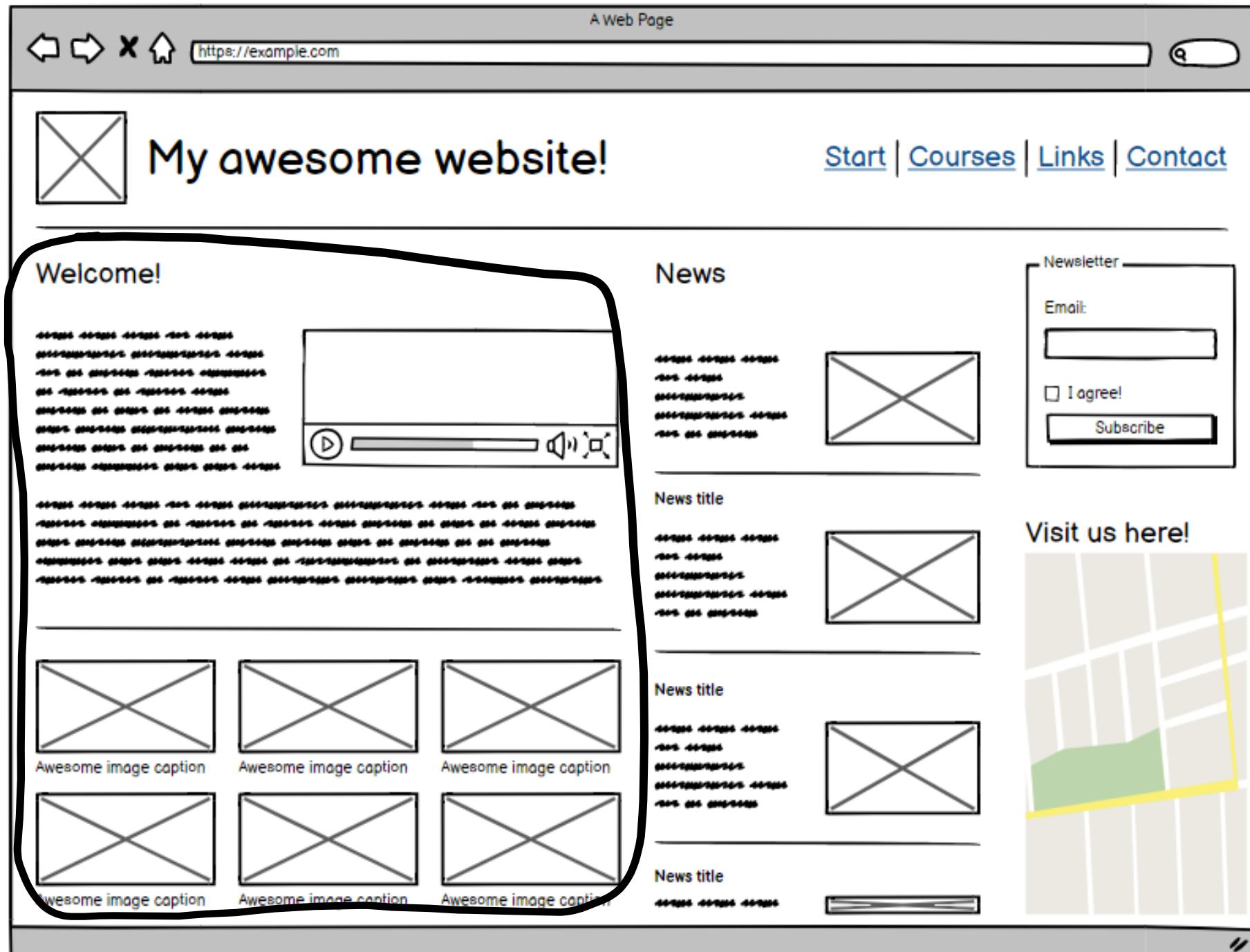
I agree!

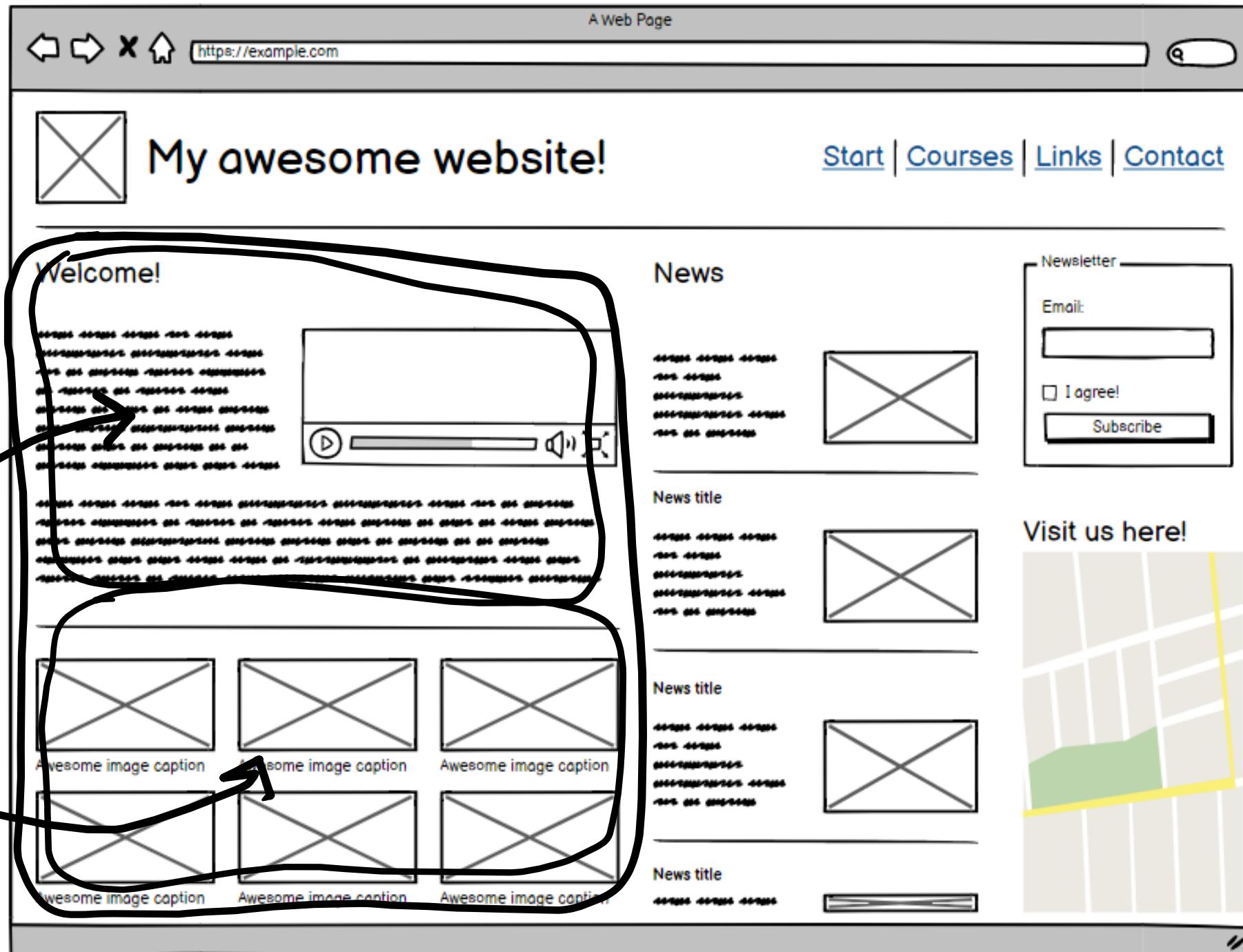
[Subscribe](#)

Visit us here!



← Navigation

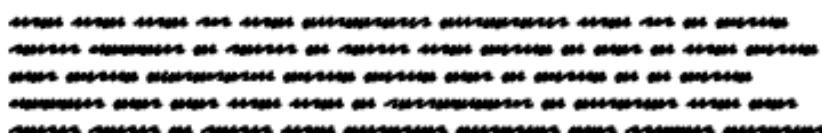
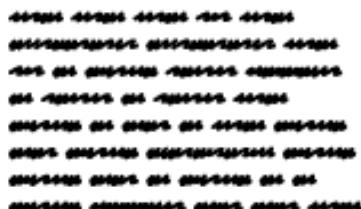






My awesome website!

Welcome!



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption

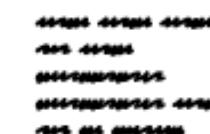


Awesome image caption

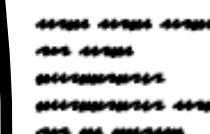


Awesome image caption

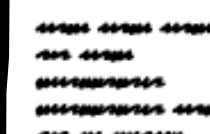
News



News title



News title



News title



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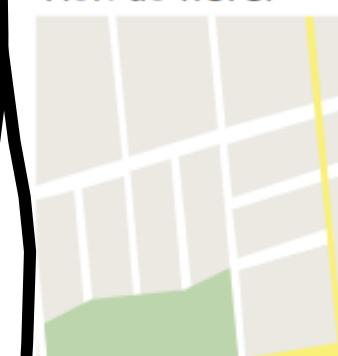
Newsletter

Email:

I agree!

Subscribe

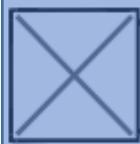
Visit us here!



Sidoinne hön

CSS - Grid

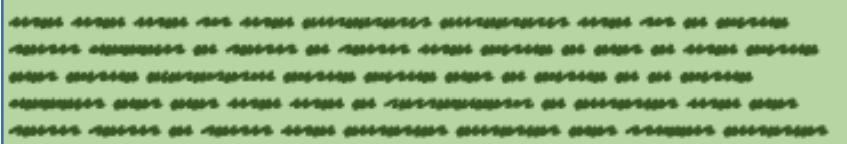
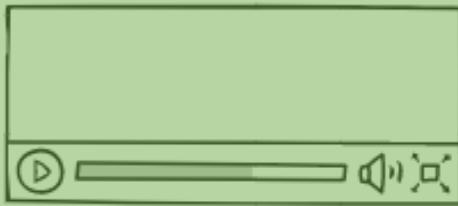
Designa webbsidor enligt ett rutnät (rader & kolumner)



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Welcome!



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption

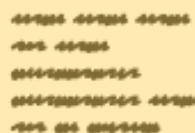


Awesome image caption

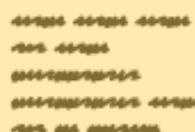
News



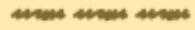
News title



News title



News title



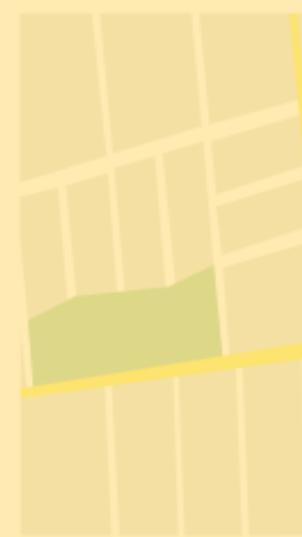
Newsletter

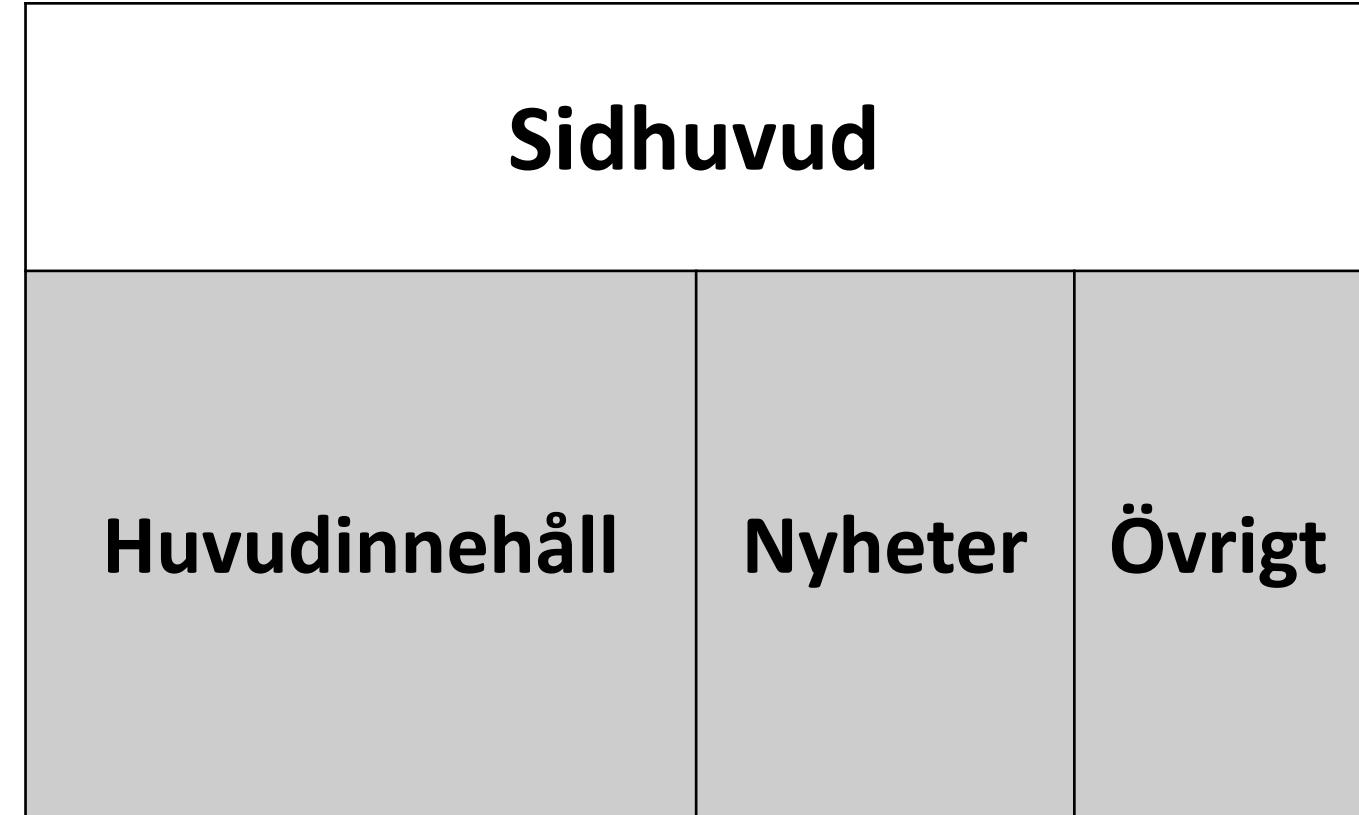
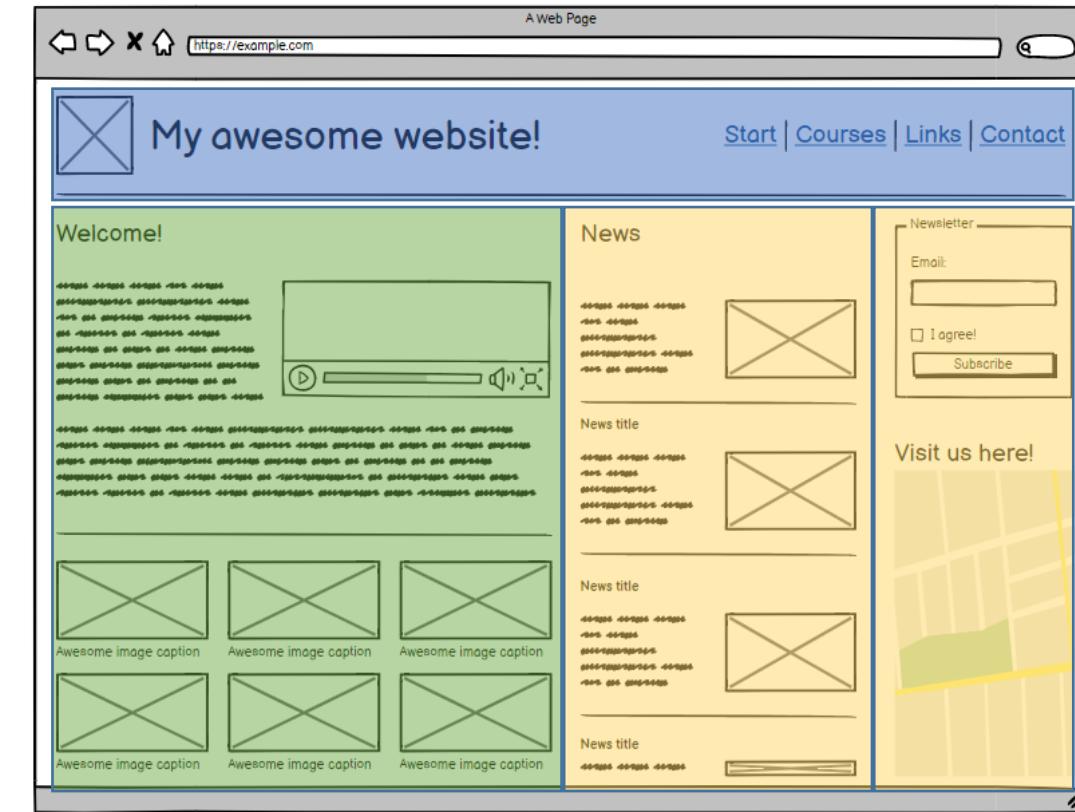
Email:

I agree!

Subscribe

Visit us here!







3 kolonner

Sidhuvud

Huvudinnehåll

Nyheter

Övrigt

2 rader

CSS - Flexbox

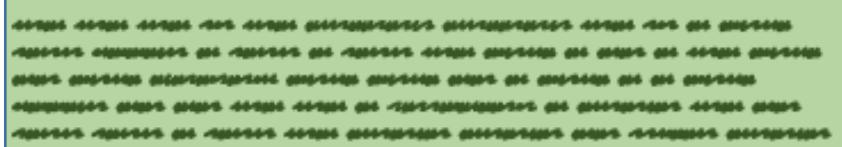
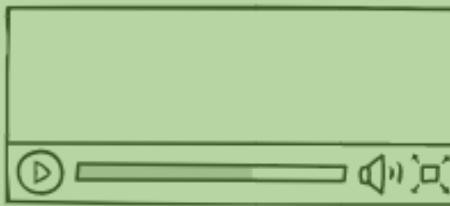
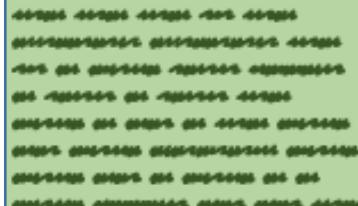
Placera en samling element enligt givna regler



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Welcome!



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption

News



News title



News title



News title



Newsletter

Email:

I agree!

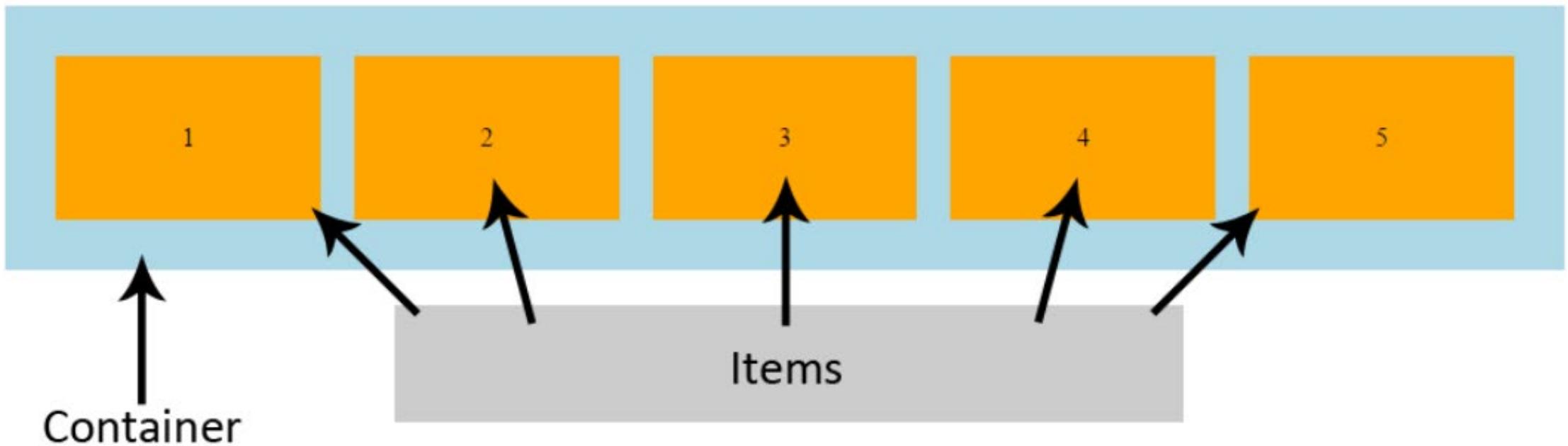
Subscribe

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Vad är flexbox?

- Ett sätt att positionera ut element på en webbsida
 - Ett alternativ till att använda t.ex. float för att bygga layouter
- Flexbox utgår från att positionerna ut barn-element i en ”container” på olika sätt.



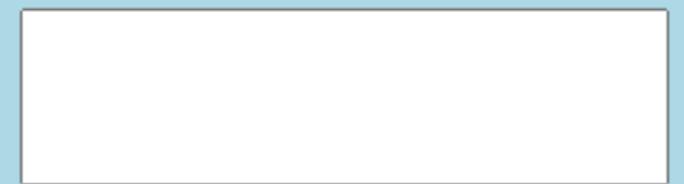
Exempel på
användning av flexbox

[Länk](#)

[Länk](#)

[Länk](#)

[Länk](#)



Log in

Enter email here...

Enter password here...

Logga in





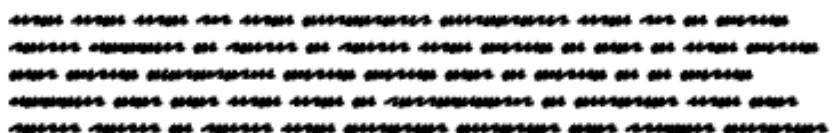
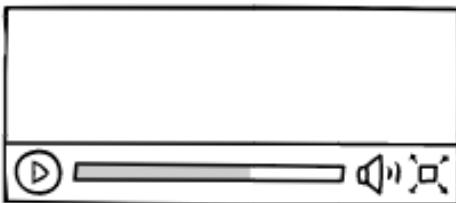
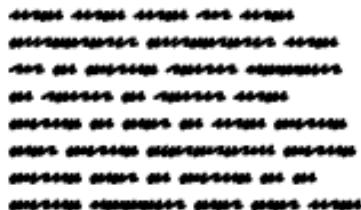
**YOU ARE
THE CSS
TO MY
HTML**



My awesome website!

[Start](#) | [Courses](#) | [Links](#) | [Contact](#)

Welcome!



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption



Awesome image caption

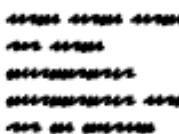


Awesome image caption

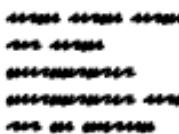
News



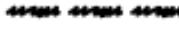
News title



News title



News title



Newsletter

Email:

I agree!

Subscribe

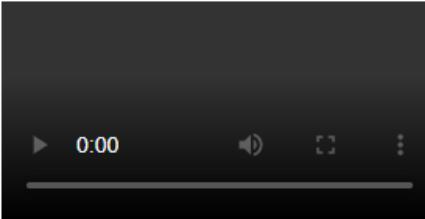
Visit us here!



Welcome!

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin sagittis eros a porta pretium. Phasellus at ex leo. Curabitur ut tellus accumsan, elementum magna eu, condimentum ligula. Sed metus dui, vehicula id mattis sed, pharetra in massa. Donec lacinia nunc ligula, eu aliquam lacus venenatis in. Nunc sollicitudin iaculis velit consequat malesuada. In hac habitasse platea dictumst. Integer eleifend ac erat maximus imperdiet.

Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Duis suscipit volutpat posuere. Sed turpis velit, placerat ullamcorper est a, ultrices convallis urna. Suspendisse eu placerat dolor, nec imperdiet quam. Nulla nec tempus tortor. Pellentesque in risus risus. Maecenas ut quam sodales orci tempor mattis.



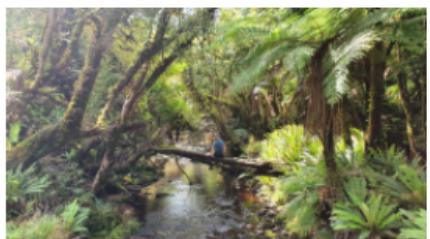
Awesome picture!



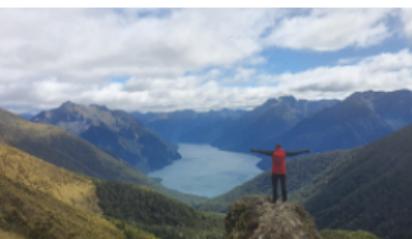
Awesome picture!



Awesome picture!



Awesome picture!



Awesome picture!

News

News title

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin sagittis eros a porta pretium. Phasellus at ex leo.

News title

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin sagittis eros a porta pretium. Phasellus at ex leo.

News title

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin sagittis eros a porta pretium. Phasellus at ex leo.

News title

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin sagittis eros a porta pretium. Phasellus at ex leo.

Newsletter

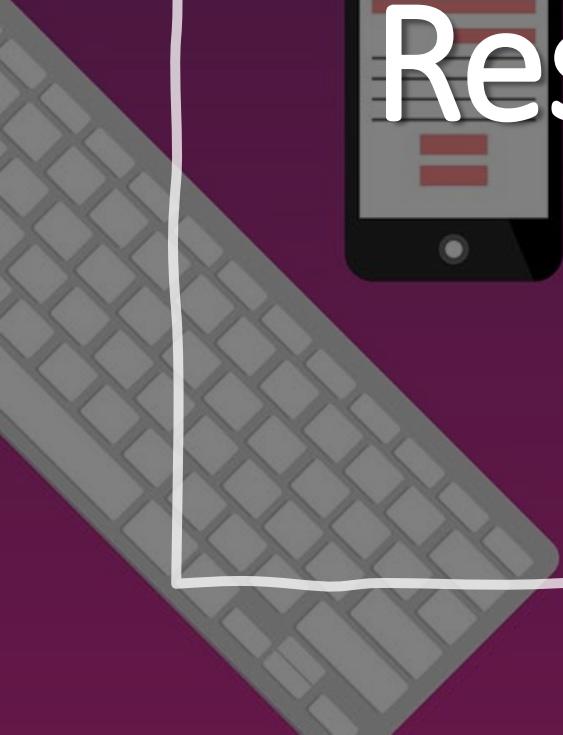
Email

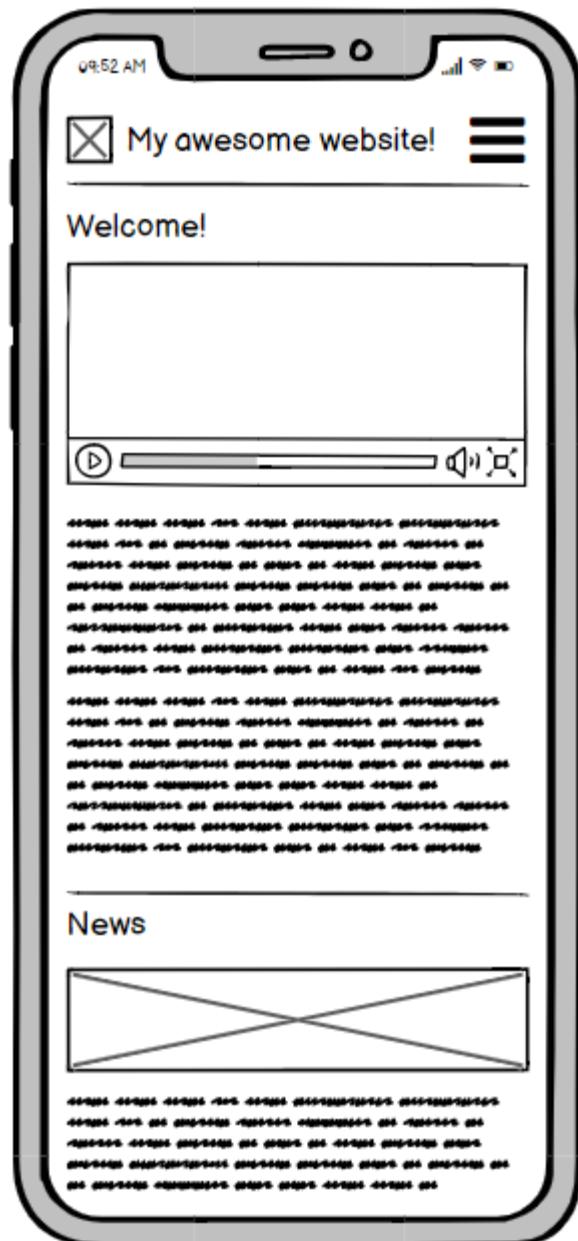
I agree!

Visit us here!



Responsiv webbutveckling





A wireframe of a web browser window titled "A Web Page". The address bar shows the URL <https://example.com>. The page content includes:

- Header:** A logo icon (cross shape) followed by the text "My awesome website!" and a navigation bar with links: [Start](#) | [Courses](#) | [Links](#) | [Contact](#).
- Welcome Section:** The text "Welcome!" followed by two video placeholders with play and volume icons. Below them is a large block of placeholder text consisting of numerous small, illegible characters.
- News Section:** The word "News" followed by three news items. Each news item has a thumbnail placeholder (cross shape), a title placeholder (cross shape), and a short description placeholder (cross shape). The titles are "News title", "News title", and "News title".
- Newsletter Form:** A form with a label "Newsletter" and a "Email:" input field. It also includes a checkbox labeled "I agree!" and a "Subscribe" button.
- Map Section:** A map with a green shaded area and a yellow border, accompanied by the text "Visit us here!".



Vilken enhet använder ni när ni surfar på webben?



Mentimeter





IMAGINE A WORLD

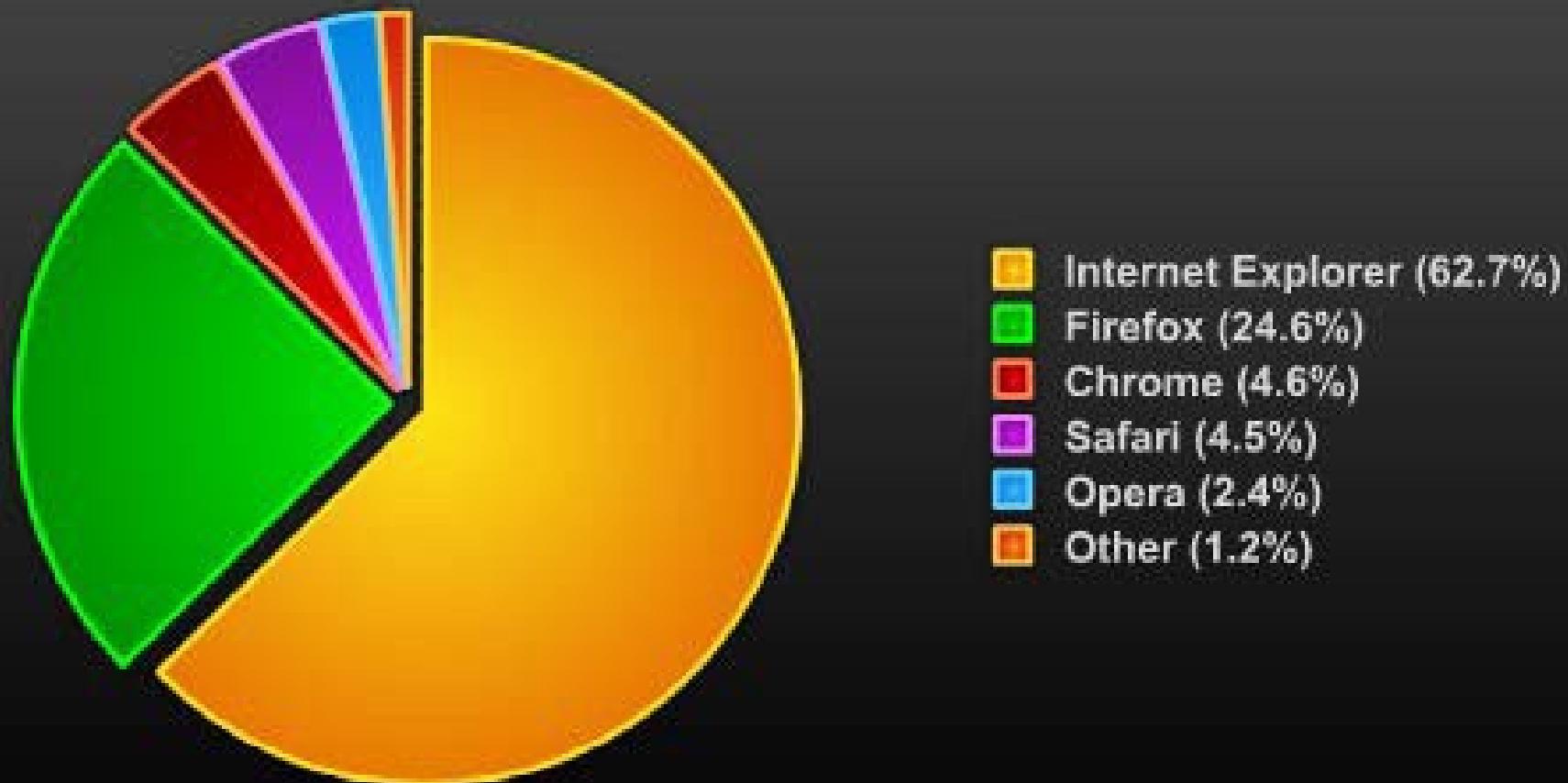


WHERE ALL SITES ARE RESPONSIVE



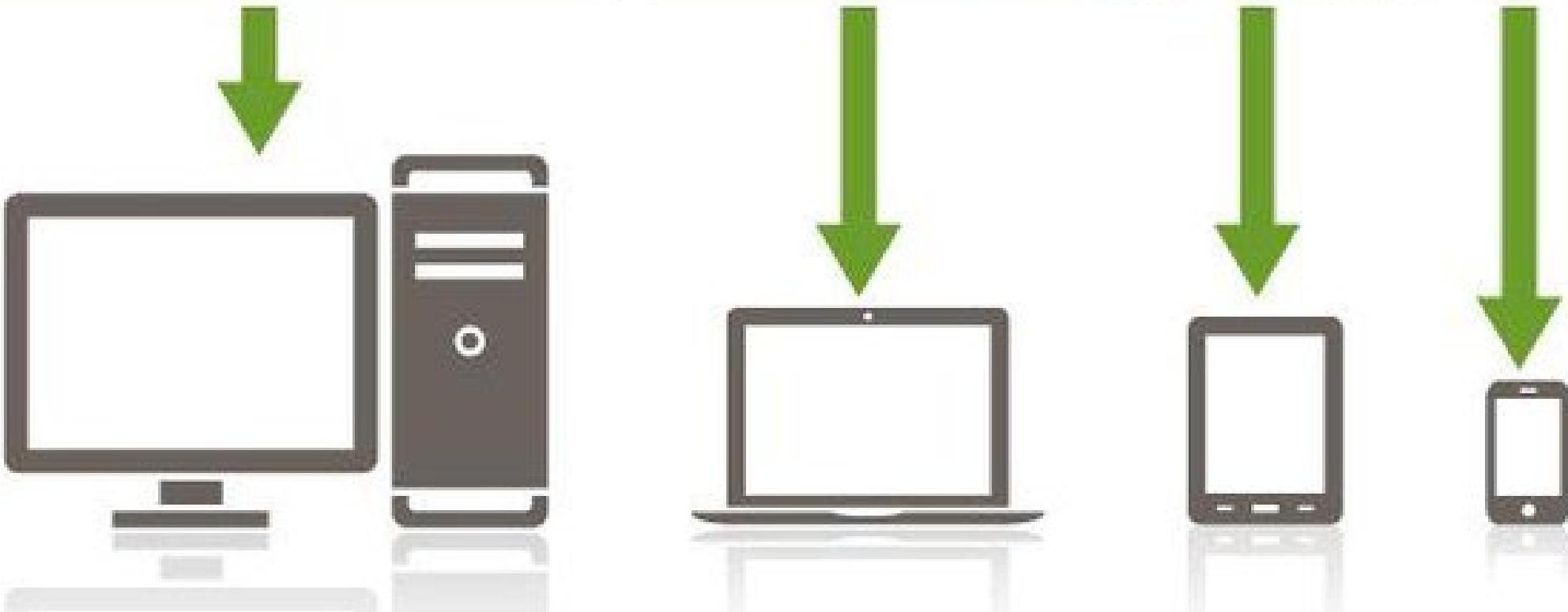


Web browser market share, December 2009



Data source: Net Applications

www.pingdom.com



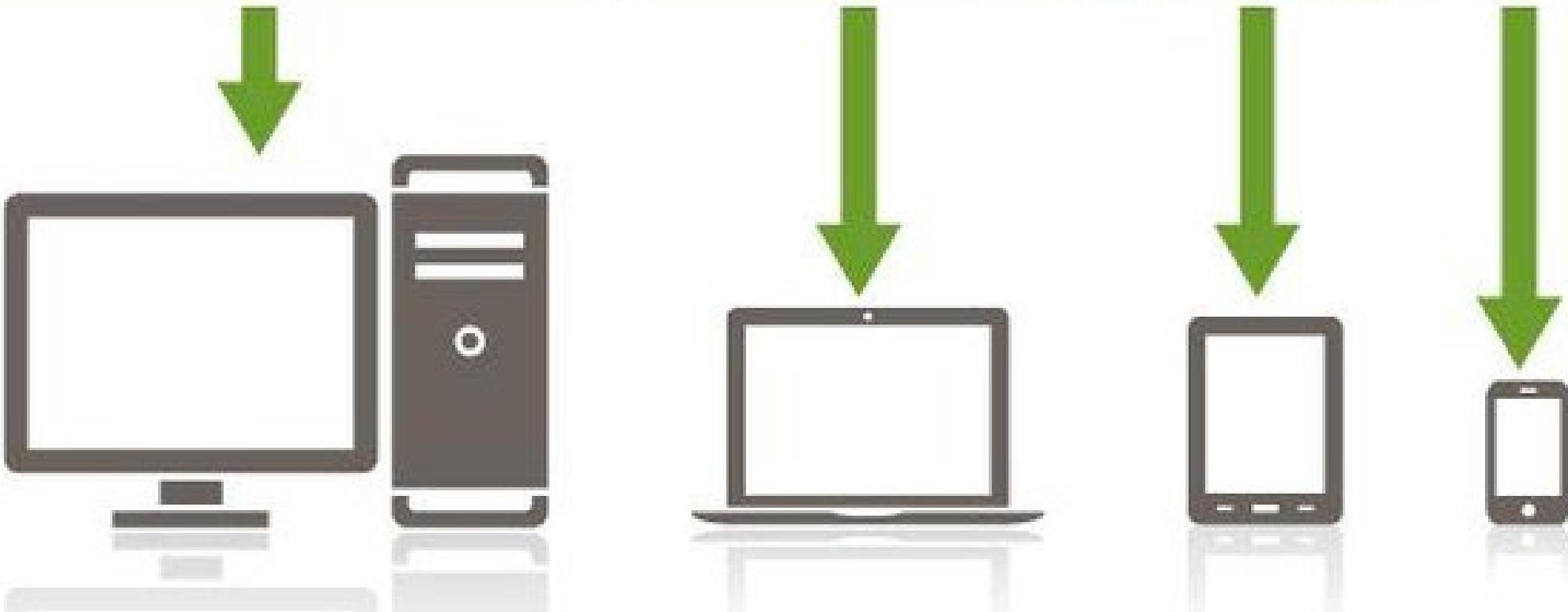
Tillbaka till 2009...

- *Webbplatser hade fasta bredder, så var det.*
- Vad hände sedan?
 - Våra skärmar blev större och större
 - Användare med mobiltelefoner började alltmer besöka våra webbplatser
- Resan från **960px** breda webbplatser, till **responsiva**

Reponsiv webbdesign?



<http://alistapart.com/article/responsive-web-design>



Responsive design
vs.
Adaptive design

Responsive v.s adaptive design



<https://css-tricks.com/the-difference-between-responsive-and-adaptive-design/>

Mer bra läsning: <https://www.fastcodesign.com/3038367/9-gifs-that-explain-responsive-design-brilliantly>

FULLY
responsive
webdesign.



Varför är det så viktigt att fokusera på responsiv design?

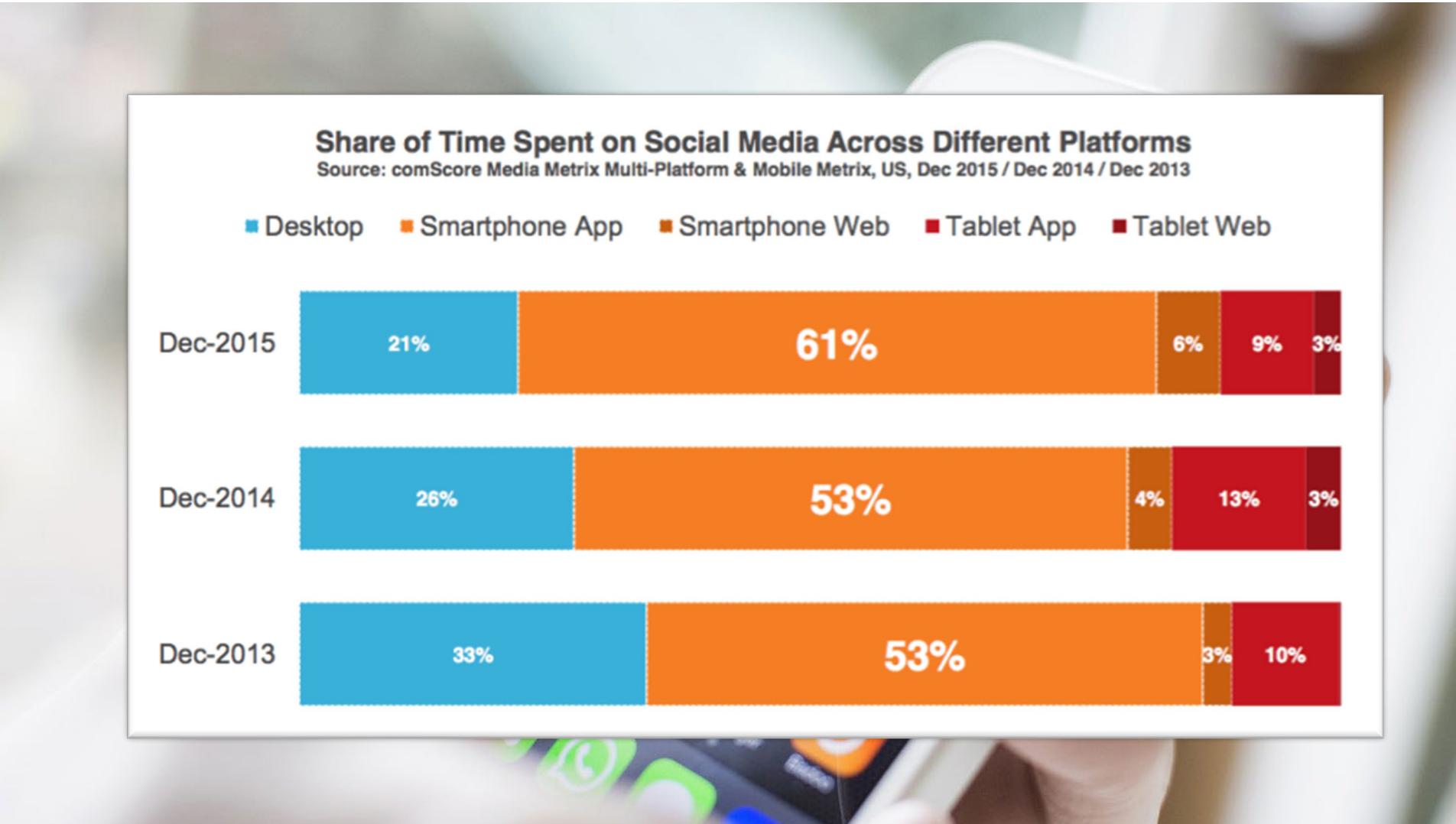
1. Allt fler surfar med mobiler/surfplattor



2. Ger oss möjlighet anpassa innehållet efter
det medium som användaren använder



3. Många webbsidor hittas genom social media, vilket används mest på mobiler



4. Responsiva webbplatser prioriteras av Google vid sökningar

Multi-screen guidelines

Make sure your site's ready for mobile-friendly Google search results



NEXT: OPTIMIZATIONS FOR THE MOBILE WEB



Starting April 21, 2015, Google Search will be expanding its use of mobile-friendliness as a ranking signal. This change will affect mobile searches in all languages worldwide and will have a significant impact in Google Search results. Users will find it easier to get relevant, high quality search results optimized for their devices. To help you make sure your website is ready for this search change, we've put together the following frequently asked questions:

Will this change affect my desktop traffic?

No. This change will affect mobile searches in all languages worldwide.

5. Snabbar upp webbsidorna



6. Vi använder mer och mer olika enheter, för att utföra, eller fortsätta utföra en uppgift

Sequential screening is common & mostly completed within a day

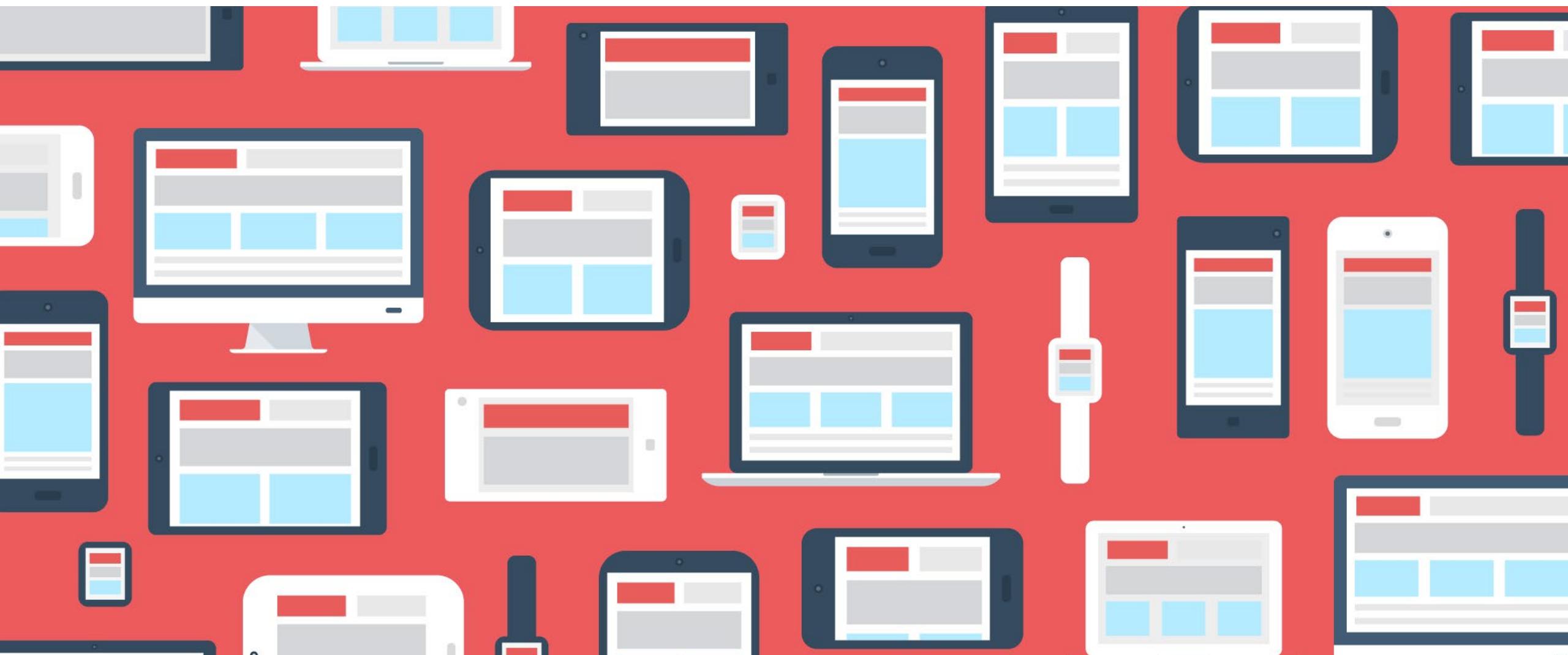
90%

Use multiple screens sequentially to accomplish a task over time



98% move between devices that same day

Med andra ord – tänk responsivt!



IMPORTANT

Fler argument!

Once your page loads, users form an opinion in .05 seconds.

— Kinesis Inc.

40% of people will choose a different search result if the first is not mobile friendly.

—Skillcrush

40% of people will leave a website if it takes more than 3 seconds to load.

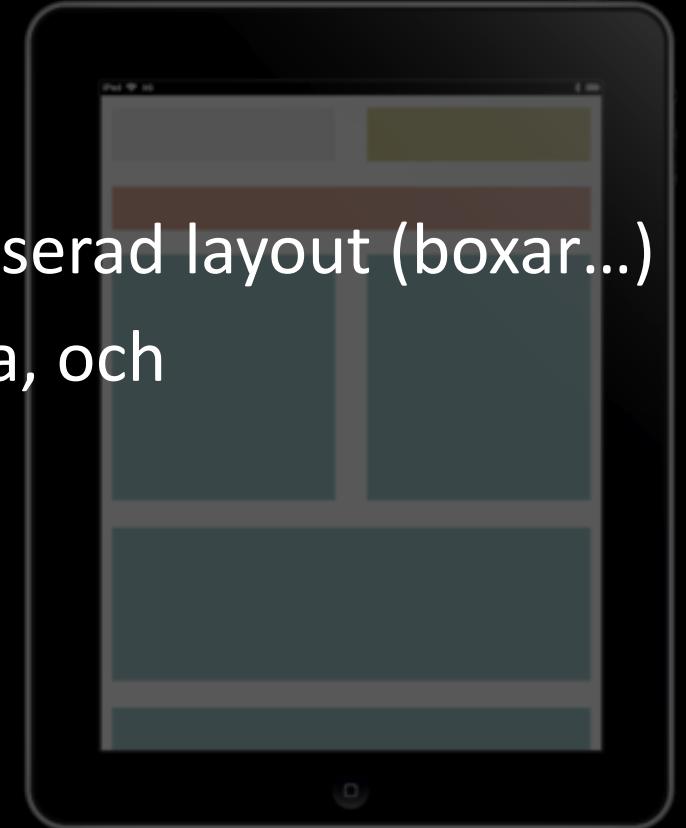
— Econsultancy

*You have 10 seconds to leave an impression
and tell them what they'll get out of your
website and company. After this time (and
oftentimes before), they'll leave.*

— NN Group

Vad krävs för att bli responsiv?

1. En flexibel, "grid"-baserad layout (boxar...)
2. Flexibla bilder, media, och
3. Media queries



Welcome to BostonGlobe.com. Feedback or questions? (866) 330-3100.

The Boston Globe

BEST NEWS

With 96% of Hollywood's budget cut, studios are racing to make films before the year ends. The Boston Globe's latest coverage includes:

- Bank of America hopes massive cuts will save billions
- Obama urges Congress to act on jobs bill
- Mixed reviews for patent law overhaul
- Many faiths, one purpose



Bank of America hopes massive cuts will save billions

In尋找銀行希望在經濟危機中，將裁員數量減至最低。這意味著，它將不得不減薪和“尋找一個更簡單的公司，以便我們可以生存。”

- **Economists cast growth forecasts**

Obama urges Congress to act on jobs bill

隨着從《羅馬傳奇》、《羅賓漢》到《魔戒》的一系列電影被取消，總統奧巴馬呼籲國會採取行動。

- **Opinion: A \$45 billion job bill**

Mixed reviews for patent law overhaul

眾議院的法律改變將對所有專利申請人造成影響，但對一些公司來說，這可能並非壞事。

- **With 96% of Hollywood's budget cut, studios are racing to make films before the year ends**
- **Obama urges Congress to act on jobs bill**
- **Mixed reviews for patent law overhaul**
- **Many faiths, one purpose**

Globe starts for-voting paid website for all devices

《波士頓》已經開始在所有移動設備上推出一個投票網站，讓選民可以在任何時候投票，而不需要在線投票。

- **Photo: 45 new congressional districts**
- **Letter to readers about our new website**
- **New site a peak into Globe's technological evolution**
- **Frequently asked questions on Globe's new website**
- **Previous Globe voters now vote on BostonGlobe.com mobile**

Many faiths, one purpose

超過1000萬人將在波士頓的多個宗教場所投票，這意味著投票率將達到歷史最高點。

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- **Letter to readers about our new website**
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Inside The Boston Globe



Microsoft

Surface
Click in and do more
New Surface

Discover

- Windows
- Office
- Windows Phone
- OneDrive
- Skype
- Microsoft Store

For home

- Get the latest tools, including for Windows
- Get Microsoft Office, OneDrive, and Microsoft Store apps
- Take your business to the cloud with Microsoft Business
- Downloads

Downloads

- Windows
- Office
- Internet Explorer

Security & updates

- Windows Updates
- Microsoft Update
- Microsoft Security Essentials
- Windows Security Center

Downloads

- Windows Downloads
- Office Downloads
- Internet Explorer

Security & updates

Microsoft Announces New Surface Details
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Local Community Assistance

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- Office download
- Download Center

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Introduktion till webbutveckling

Introduktion till webbutveckling

Denna webbplats innehåller material från en grundkurs i webbutveckling. De som läser kursen är den primära målgruppen, men mycket kan förhoppningsvis vara användbart även för andra. Allt material är publicerat under en **fri licens**, vilket gör att det kan återanvändas av andra, så länge upphovsman anges.

Syfte

I den bakomliggande kursplanen beskrivs syfte och mål:

Kursen syftar till att introducera utveckling av webbplatser, liksom en teoretisk bakgrund till de begränsningar och möjligheter som ges av aktuella standarder och plattformar. Studenten ska också utveckla en inledande förståelse av hur användarbehov och -beteende kan styra utvecklingen av ett gränssnitt.

Den beskrivningen är väldigt avsiktligt formulerad utan att nämna specifika tekniker. Istället ligger fokus på "modern webbutveckling" och "aktuella standarder och plattformar". Målet är således att hålla en bra balans mellan grundläggande principer och viktiga nya utvecklingar. Hösten 2015 betyder det bland annat HTML5 och CSS 3, med fokus på tillgänglighet och användbarhet för olika enheter.

Upplägg

Webbplatsen är baserad på en höggradig interaktivitet. Kursen är också praktiskt - ämnet rekommenderade övningar. Studenter examineras med inlämnade projekt.

Kontakt

Anton Tibblin är kursansvarig och kan rapporteras till anton.tibblin@mah.se.

Bra länkar

Malmö Högskola

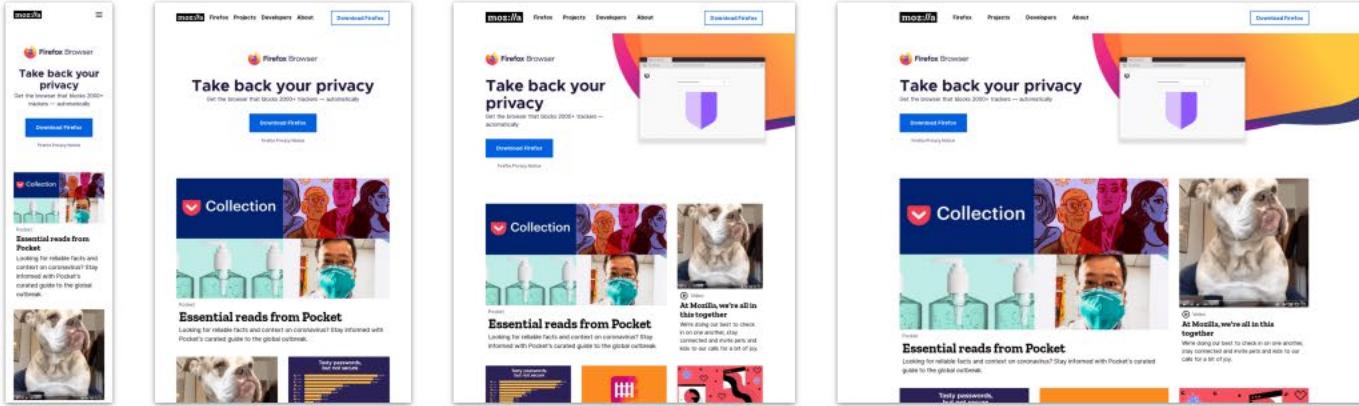
Media Queries



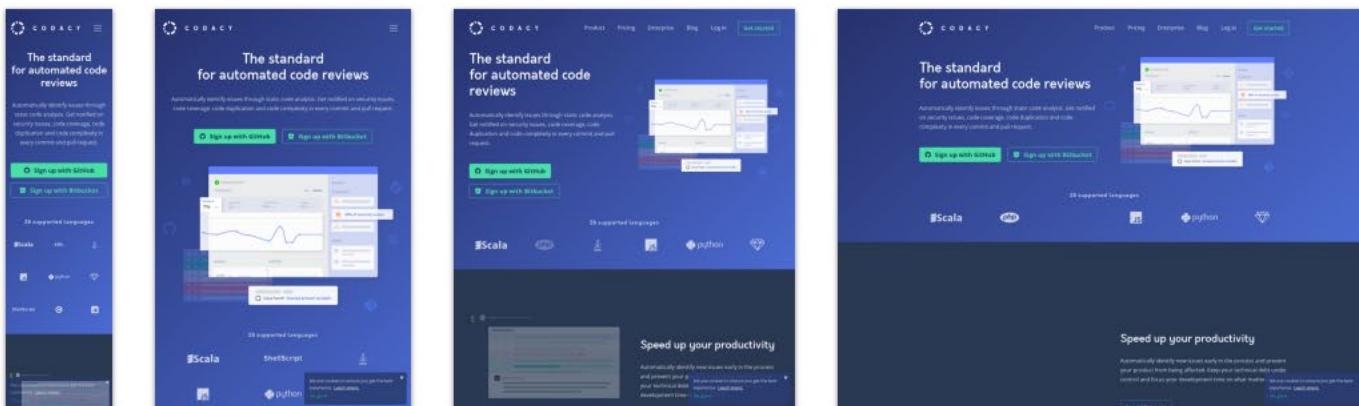
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ads via Carbon

Mozilla



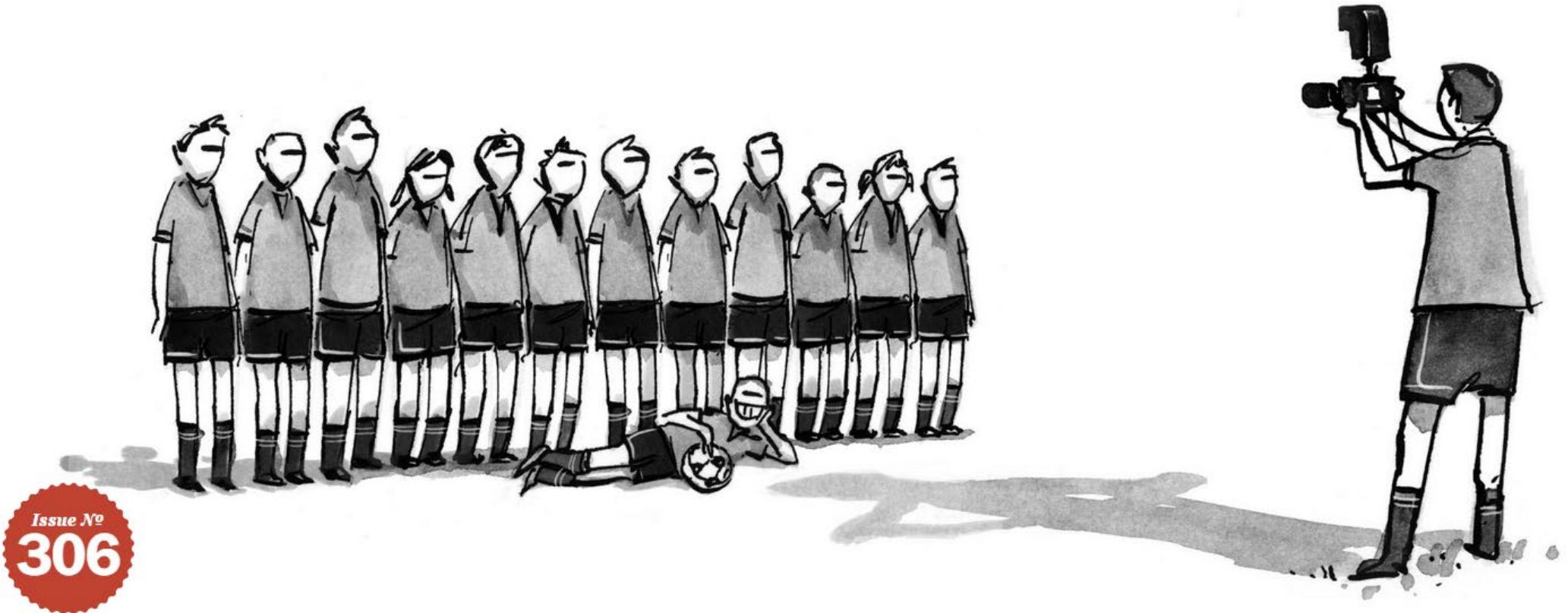
Codacy



Code Climate



<http://mediaqueri.es/>



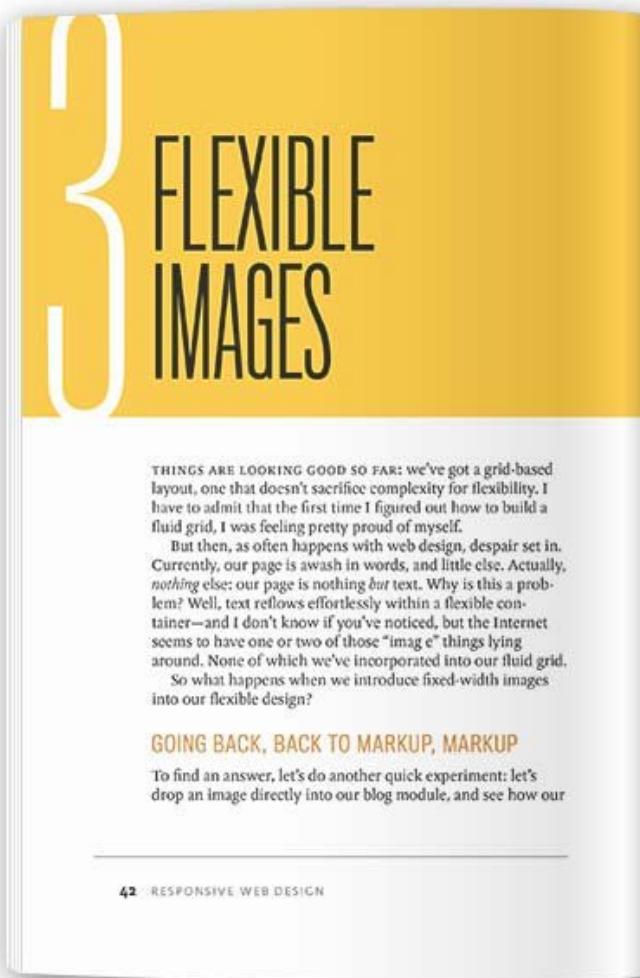
Issue №
306

Responsive Web Design

by ETHAN MARCOTTE · May 25, 2010

Published in [CSS](#), [Layout & Grids](#), [Mobile/Multidevice](#), [Responsive Design](#), [Interaction Design](#) ·

[103 Comments](#)



<http://www.abookapart.com/products/responsive-web-design>

<http://alistapart.com/article/dao>

The web's greatest strength, I believe, is often seen as a limitation, as a defect. It is the nature of the web to be flexible, and it should be our role as designers and developers to embrace this flexibility, and produce pages which, by being flexible, are accessible to all.

—John Allsopp, 2000

Nyckelord för responsiv webbdesign

- CSS 3 Media Queries
- Flexible layout
- Flexible media
- Breakpoints
- Mobile viewport sizes
- Compatibility

KEYWORDS



<http://www.w3.org/TR/css3-mediaqueries/>

W3C Recommendation



Media Queries

W3C Recommendation 19 June 2012

This Version:

<http://www.w3.org/TR/2012/REC-css3-mediaqueries-20120619/>

Latest Version:

<http://www.w3.org/TR/css3-mediaqueries/>

Latest Editor's Draft:

<http://dev.w3.org/csswg/css3-mediaqueries/>

Previous Version:

<http://www.w3.org/TR/2012/PR-css3-mediaqueries-20120426/>

Disposition of Comments:

<http://www.w3.org/Style/2012/MediaQueriesDisposalOfComments.html>

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Anne van Kesteren <annevk@opera.com>

Please refer to the [errata](#) for this document, which may include some normative corrections.

See also [translations](#).



Att formge olika medier | Print & Screen

Olika typer av stilmallar

```
<link rel="stylesheet" type="text/css" media="screen" href="style.css">
```

```
<link rel="stylesheet" type="text/css" media="print" href="print.css">
```



PRINT

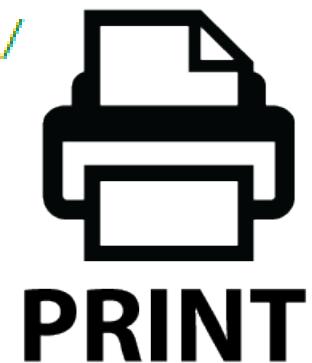


Att styra för olika mål

```
@media screen{  
    /* Gör texten blå till webbsidan för skärmar */  
    body{  
        color: blue;  
    }  
}
```



```
@media print{  
    /* Gör texten svart till utskriftsversionen av webbsidan */  
    body{  
        color: black;  
    }  
}
```



Att styra för olika upplösningar

```
@media screen and (min-width: 900px) {  
    body{  
        background-color: blue;  
    }  
}  
  
@media screen and (max-width: 500px) {  
    body{  
        background-color: red;  
    }  
}  
  
@media screen and (min-width: 500px) and (max-width: 900px) {  
    body{  
        background-color: green;  
    }  
}
```

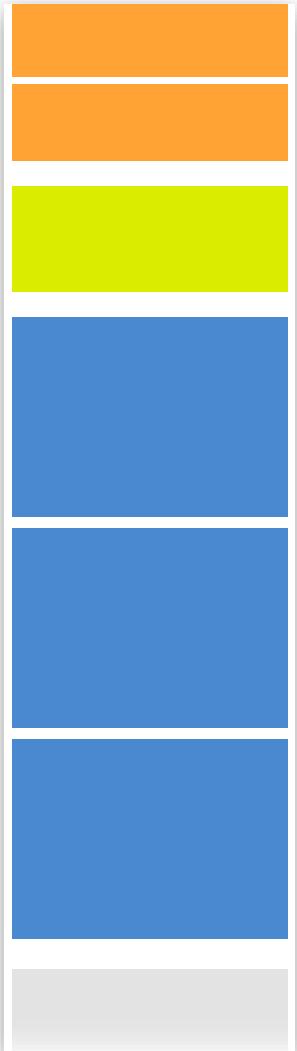
Att styra för olika upplösningar

```
@media screen and (max-width:360px) {  
    /* Styling */  
}  
  
@media (min-width:480px) {  
    /* Styling */  
}  
  
@media screen and (min-device-width: 480px)  
and (orientation: landscape){  
    /* Styling */  
}
```





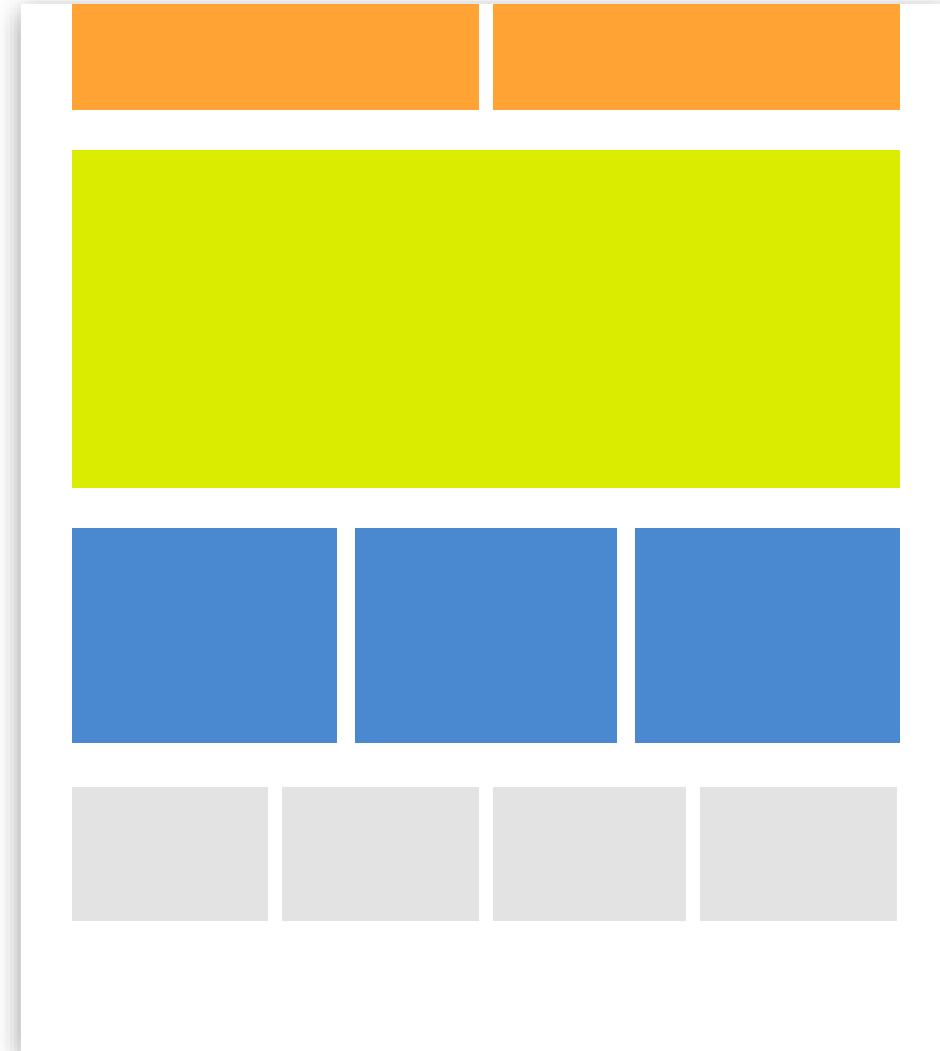
320px



768px



1024px





Att jobba med media queries

DEMO - media print & media screen

Enheter i CSS

Relative Lengths

Relative length units specify a length relative to another length property. Relative length units scales better between different rendering mediums.

Unit	Description	
em	Relative to the font-size of the element (2em means 2 times the size of the current font)	Try it
ex	Relative to the x-height of the current font (rarely used)	Try it
ch	Relative to width of the "0" (zero)	
rem	Relative to font-size of the root element	
vw	Relative to 1% of the width of the viewport*	Try it
vh	Relative to 1% of the height of the viewport*	Try it
vmin	Relative to 1% of viewport's* smaller dimension	Try it
vmax	Relative to 1% of viewport's* larger dimension	Try it
%		

Enheter i CSS

Absolute Lengths

The absolute length units are fixed and a length expressed in any of these will appear as exactly that size.

Absolute length units are not recommended for use on screen, because screen sizes vary so much. However, they can be used if the output medium is known, such as for print layout.

Unit	Description	
cm	centimeters	Try it
mm	millimeters	Try it
in	inches (1in = 96px = 2.54cm)	Try it
px *	pixels (1px = 1/96th of 1in)	Try it
pt	points (1pt = 1/72 of 1in)	Try it
pc	picas (1pc = 12 pt)	Try it

Flexibel layout & media

%

Exempelsida

Om Star Wars

Navigation

[Star Wars - The force awakens](#)

Star Wars - The force awakens

"Star Wars" har fått ett nytt skimrande hopp

"The Force Awakens" är inte bara en grandios öppning på en ny trilogi, det är en av årets bästa filmer oavsett genre, och om nöd också vill känna dig som sju är gammal igen för några timmar så får du bara inte missa den. Det här är total eufori för alla fans.

Jag ler. Jag ler med hela anslaget, från öra till öra, och har gjort det ända sedan den där klassiska rullande förtexten drog igång. Jag älskar "Star Wars", förstå ni, och "The Force Awakens" är ett kärleksbrev till just mig. Eller till oss, till alla som vuxit upp på Hoth eller på Tatooine, eller kanske på en av Endors månen.

På den hårda ökenplaneten Jakku hittar vi Rey, en alldeles för energisk och optimistisk ung flicka som har ränta över Stormtrooper på utrustning som hon sedan säljer för matansoner. I en läcker selvrens för vi folja henne när hon klättrar runt intill ett av de enorma strandade skeppen som kräcklandat i sandhavet. Det är smutsigt, oigåtvärligt och utsatt, och det var alltså inte bara PR-snack att vi skulle få en långt mycket mer realistisk värld den här gången. Det känns "Star Wars" på det där ingroddta sättet som "Star Wars" kändes förr. Sand i ögonen och damm i hören, liksom. This aint your childrens "Star Wars".

På ett uppdrag för The First Order, som går att jämföra med det gamla Imperiet, ungefär, hittar vi Finn, en stormtrooper med ett hjärtå, som vilket leter en anledning att lyda sina order. När han inte hittar någon drar äventyret igång, och inom kort har Finn, Rey, och den lilla, underbart sötta robotten BB-8 tillsammans lyckats få den onde Kylo Ren efter sig i en vild katt-och-hattate-lek som ska ta dem långt ut i galaxen och vidare.

Det känns direkt nägonstans i maggruppen att J.J. Abrams träffat rätt. I princip varenda karakter jágs introduceras till har djup, hjärta och själ, och det är mitt sanna nöje att börja tycka om dem allihop, nästan från start. Humor som bollas fram emellan dem sitter som handen i handsken och jag garvar högt gång på gång, i lika delar fänget euforisk nostalgi som genuin glädje. Filmen backar inte för att blanda upp de frenetiska actionsevenserna med ett skämt här, eller en glirring där, och det är valdigt befrämnde. Det finns en alldeles lagom mängd respekt för originalfilogen här. Nog för att känna värdfull, men inte så mycket att den stryper all kreativitet.

"The Force Awakens" har också lyckats med konststycket att hitta exakt rätt skädisar till rätt roller. Daisy Ridley som Rey är en skådespelerska att bli kär i, och spelar med en särbarhet och ärlighet som får mig att bry mig om henne, på riktigt. Hon är en fullständig uppenbarelse. John Boyega som Finn är rolig, för det mestta utan att dra det för långt, och återigen, han förmelder hjärta innanför den där vita plastrustringen. Adam Driver fullkomligen springer hem guldet med sin prestation som Kylo Ren, och lyckas både känna hotfull, volatl och paradoxalt nog svag på samma gång. Det är näronting i hans röst parat med hans långa slanka siluetten som verkligen säljer karaktern. Hans Jussabell, den där röda med parerstång, hostar och kraxar och sprakar förhårt varje gång han tar fram den och jag inbillar mig att han byggt den själv i något garage nägonstans, utan att egentligen veta hur man gör. Jag lyser upp varje gång han kommer in i bild.

Historien är simpel och går i en rak linje, ungefär som den gjorde i den första filmen från 1977. Det här är nämligen i mångt och mycket "Stjärnornas Krig" fast 38 år senare. Strukturen är densamma i "The Force Awakens", och det känns matiné och äventyr här istället för handelspolitik och kryssad kärlekshistoria. Det är



Auto



Att jobba med dynamisk bredd

% istället för pixlar

Brytpunkter? Hur var närl?

The image displays three side-by-side screenshots of the Microsoft homepage, illustrating a design evolution for the Surface product page.

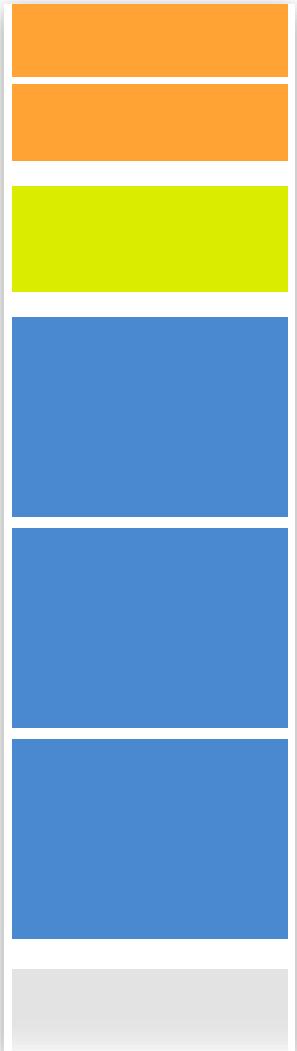
Screenshot 1 (Left): Shows the initial version of the Surface product page. It features a large "Surface Click in and do more" banner at the top. Below it is a "Discover" section with links for Windows, Office, Windows Phone, Bing, and Microsoft Store. The main content area is titled "For home" and includes sections for Downloads, Security & updates, and Support. A "Microsoft Announces New Surface Details" news card is present at the bottom.

Screenshot 2 (Middle): Shows a refined version of the Surface product page. The "Discover" section has been moved to the top right. The main content area is now titled "For home" and includes sections for Windows, Office, Windows Phone, Bing, and Microsoft Store. The "Downloads", "Security & updates", and "Support" sections have been moved to the bottom of the page.

Screenshot 3 (Right): Shows the final, most polished version of the Surface product page. The "Discover" section is now fully integrated into the top navigation bar. The main content area is titled "For home" and includes sections for Windows, Office, Windows Phone, Bing, and Microsoft Store. The "Downloads", "Security & updates", and "Support" sections are now located in the bottom right corner of the page.



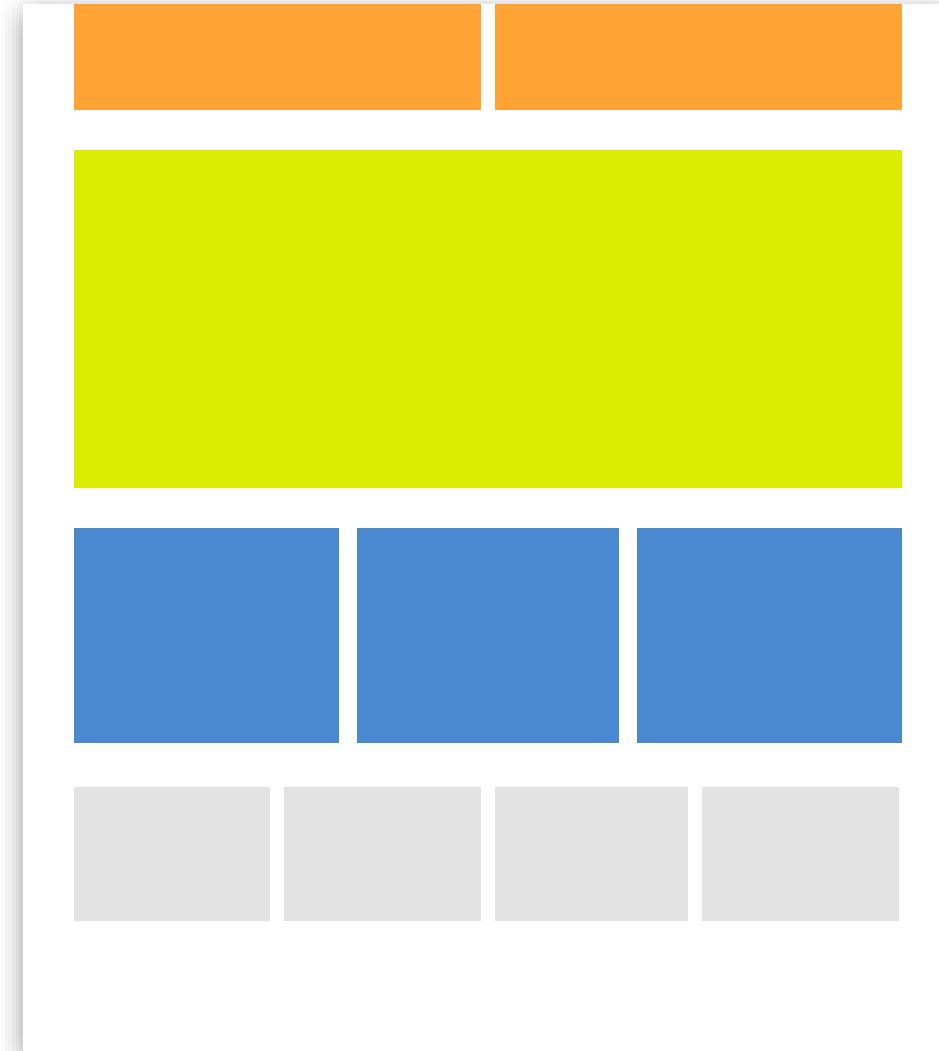
320px



768px



1024px



320 pixels	For small screen devices, like phones, held in portrait mode.
480 pixels	For small screen devices, like phones, held in landscape mode.
600 pixels	Smaller tablets, like the Amazon Kindle (600×800) and Barnes & Noble Nook (600×1024), held in portrait mode.
768 pixels	Ten-inch tablets like the iPad (768×1024) held in portrait mode.
1024 pixels	Tablets like the iPad (1024×768) held in landscape mode, as well as certain laptop, netbook, and desktop displays.
1200 pixels	For widescreen displays, primarily laptop and desktop browsers.

TABLE 5.1: A list of example resolution breakpoints.

Exempel på brytpunkter

<http://lawrencestewart.ca/popular-media-queries-for-responsive-web-design/>



Brief books for people who make websites

NO.

6

Luke Wroblewski

MOBILE FIRST

FOREWORD BY Jeffrey Zeldman



*"Start with the small screen first, then expand until it looks like *crap*. Time to insert a breakpoint!"*

<http://www.peachpit.com/articles/article.aspx?p=1945831>

Responsiv design

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[Till föreläsningen som exemplet hör till.](#)

Att jobba med brytpunkter

Vilka enheter ska vi anpassa oss till?



Responsiv design

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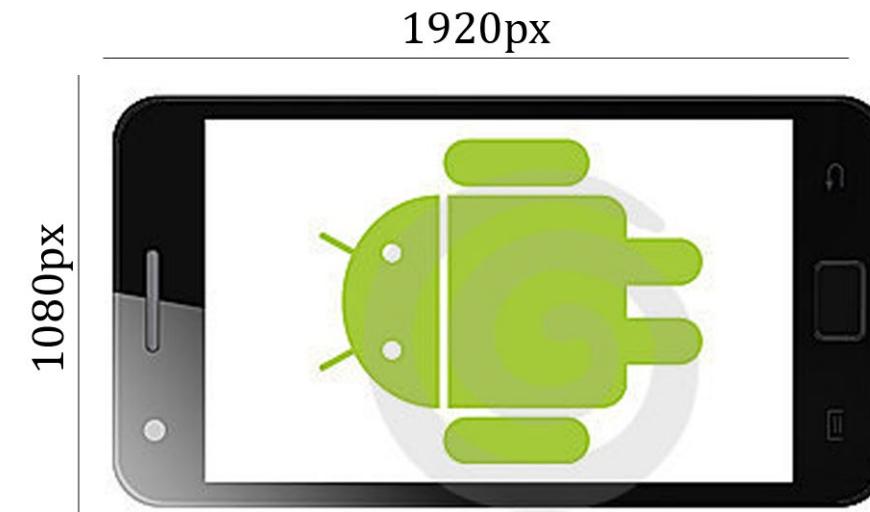
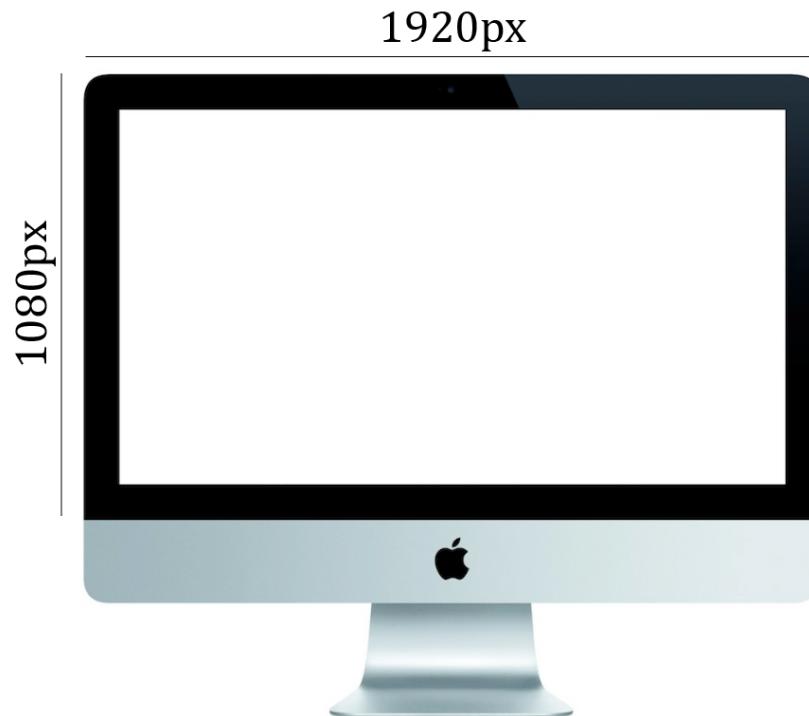
Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

[Till föreläsningen som exemplet hör till.](#)

Mobile Viewport Sizes

Är en pixel alltid en pixel?

https://developer.mozilla.org/en-US/docs/Mozilla/Mobile/Viewport_meta_tag







```
alert(document.documentElement.clientWidth);
```



Anpassa storlek efter skärmstorlek

Hmm, det blev ju ganska litet... hur löser vi detta?



shorturl.at/gBCK1

<https://webshare.mah.se/tsanti/da156a/nonresponsive/>

Olika viewports

```
<meta name="viewport" content="initial-scale=1.0, width=device-width">
```

initial-scale=1

maximum-scale=1

minimum-scale=1

width=500

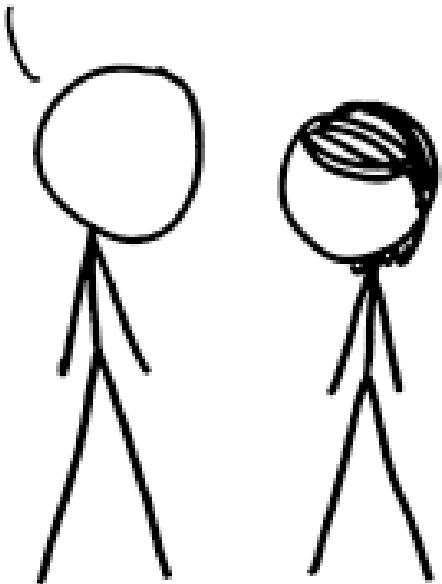
user-scalable=no

<http://dev.w3.org/csswg/css-device-adapt/>

Gör vår webbsida responsiv! =)

INSTALLING THINGS HAS
GOTTEN SO FAST AND PAINLESS.

WHY NOT SKIP IT ENTIRELY,
AND MAKE A PHONE THAT HAS
EVERY APP "INSTALLED" ALREADY
AND JUST DOWNLOADS AND RUNS
THEM ON THE FLY?



I FELT PRETTY CLEVER UNTIL I
REALIZED I'D INVENTED WEBPAGES.