

Version 0.1 of the presentation

# Bridging the Gap Between Desktop and Mobile Publishing with Drupal

## Drupalcon London 2011

# About ConsumerSearch

Part of the New York Times company

Traffic information

Drupal 5 -> Drupal 6

Mobile Site since 2011

Mobile Traffic

## We Simplify The Complex

**1. Collect** *the best reviews*



**2. Analyze** *their picks*



**3. Recommend** *what to buy*



# About the speaker

Director of Technology at ConsumerSearch

Twom

<http://www.mobiledrupal.com>

Expertise

- Solr Search
- Site Migrations
- Mobile Development
- Third-party integration
- Belgian cuisine

Module Maintainer

- Mobile Tools
- WURFL
- Bango Analytics
- Zendesk



# Roadmap

Introductions

Mobile Penetration / Stats

Before Development begins

You have a Plan, now Development begins

Unleashing the Power of Drupal

Drupal Strategies & Architecture

Drupal Tools & How Tos

Mobile Testing Techniques / Tools

Q & A

# Mobile Penetration

Facebook: 200M mobile users, 2x more active than Desktop users

Twitter Mobile: 50% of total active users, 40% of all tweets

## Opportunities

Only 21% of Google's largest advertisers have a website that is optimized for mobile

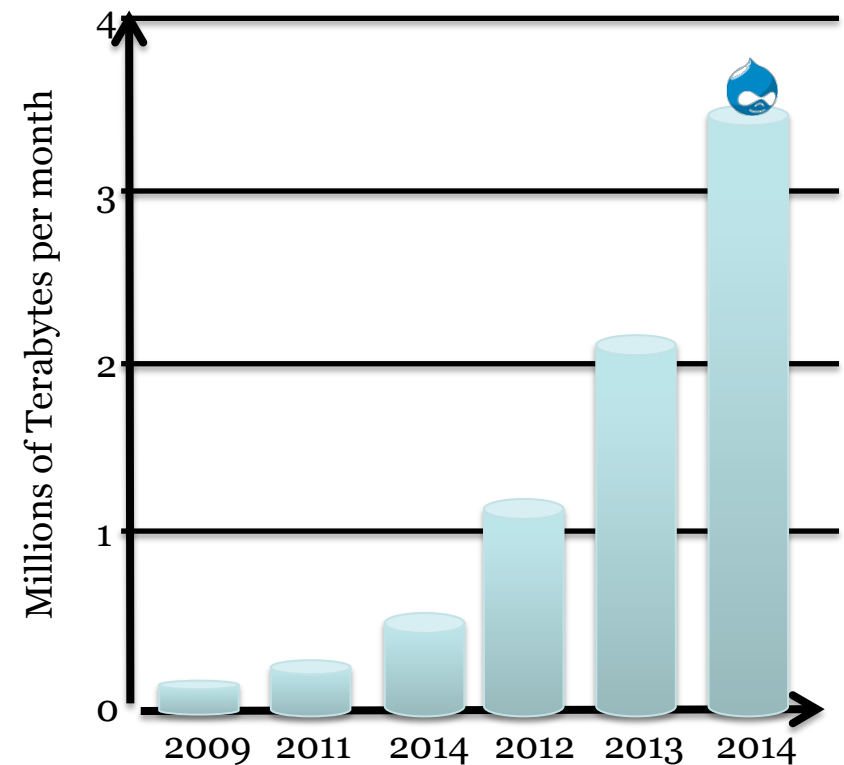
Communicate directly with consumers

Social Networking

E-Commerce

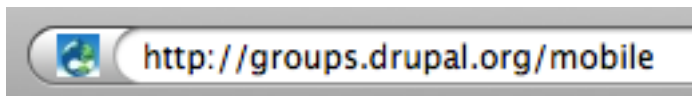
Additional Advertising Medium

Gaming



Mobile traffic prediction

# Adoption within the Drupal Community



43 Modules match your search

Modules categories:

Filter by compatibility:

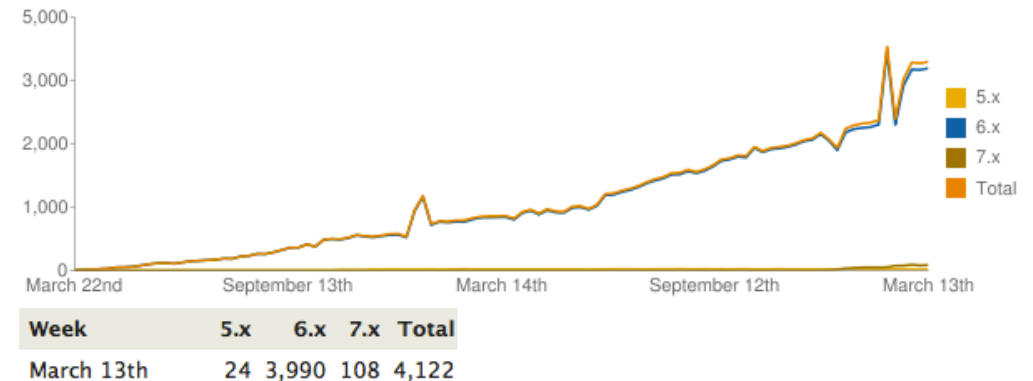
Status:

Search Modules:

Sort by:

## Weekly project usage

Weekly Mobile Tools usage by API version



# Module Matrix

Todo: Matrix showing quick comparison between existing modules:

- Device Detection
- Theme switching
- Redirecting
- Mobile Theme
- Views Integration
- Panels Integration
- Context Integration

# Drupal as a multi-platform CMS

Drupal not only targets Desktops, but also tablets and mobile devices

Flexible content model & templating engine allows Drupal to target multiple devices

## Advantages of using Drupal as a multiplatform CMS

One content store for multiple platforms

Available tools

Mobile Tools

WURFL

Fusion Mobile

Context Module

Services





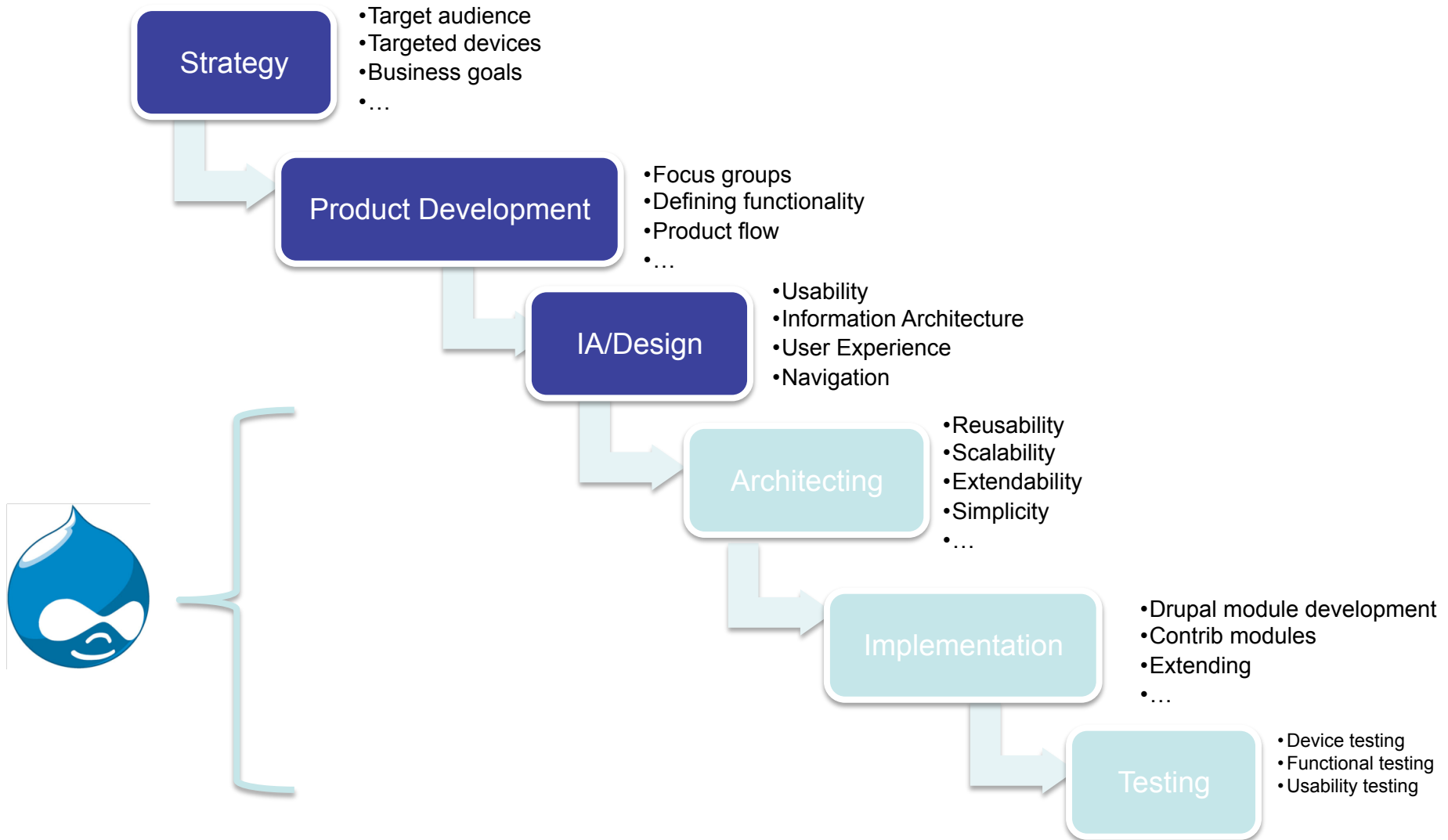
# Drupal 6 / 7 / 8

Some context on the different versions

# Drupal as a Desktop focus CMS

# Challenges

# STAGES OF CREATING A MOBILE PROJECT

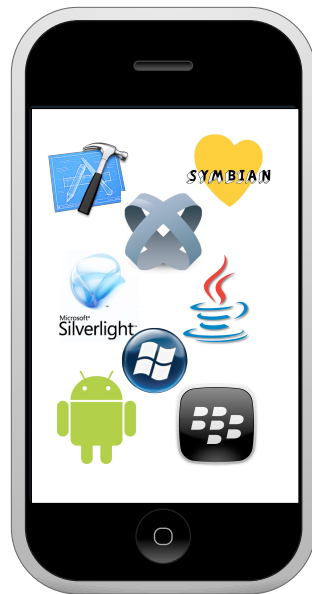




# ARCHITECTING FOR MOBILE

# “APP” VS MOBILE WEBSITE

iPhone/Android/... App

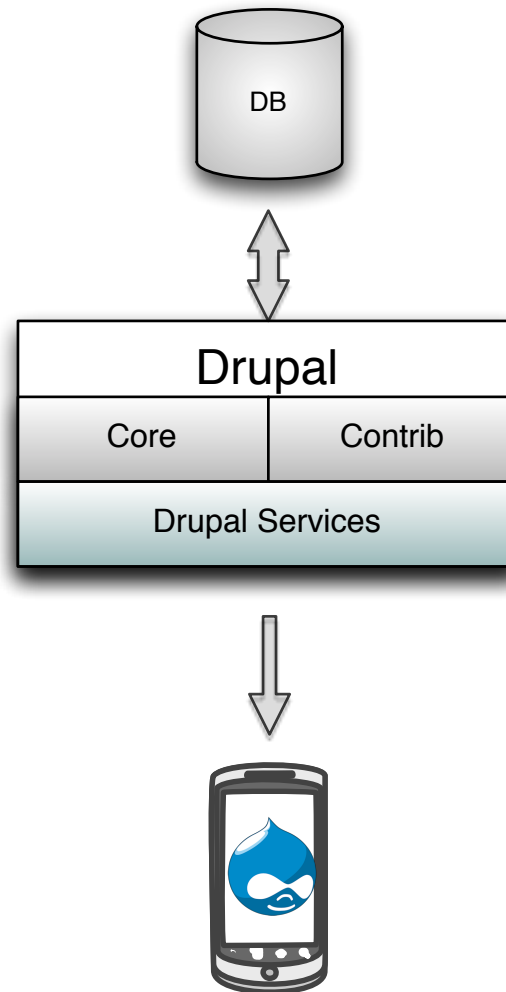


Mobile Website



Drupal supports both strategies!

# CREATING AN APPLICATION WITH DRUPAL BACKEND



# CASE STUDY: MEDIUM-SIZED NON-PROFIT

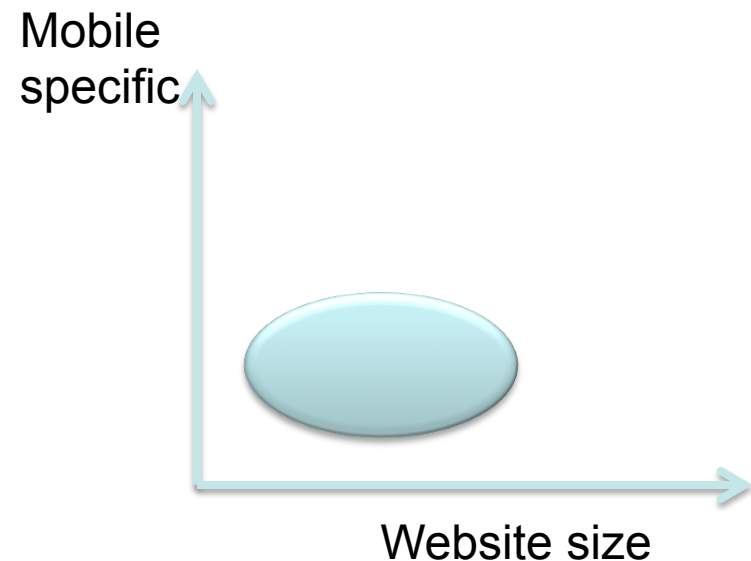
Give access to information to members on all devices

Focus on availability of content

Consistency of design across platforms is important

No specific contextual mobile functionality

Value device reach more than design





# Creating a responsive template

Media Queries

Fluid CSS

Use Drupal Build Modes

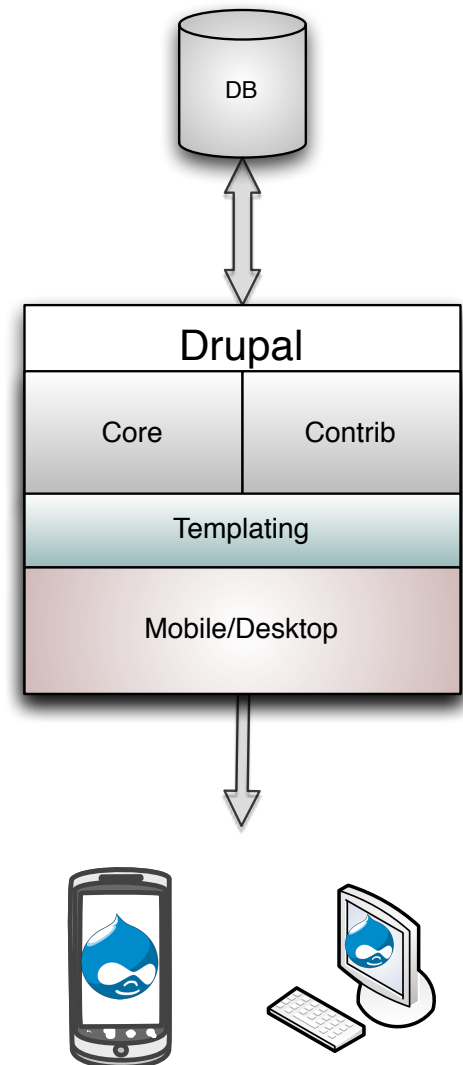
Context Module



Easy setup  
Large reuse of existing infrastructure  
Multi-content distribution



No mobile first approach  
Desktop-focused default theming behavior  
needs many changes to fit mobile context  
Hard to create real mobile “experiences” or  
contextual apps



## Use Case: Product Company

Focus on getting crucial information available on mobile devices

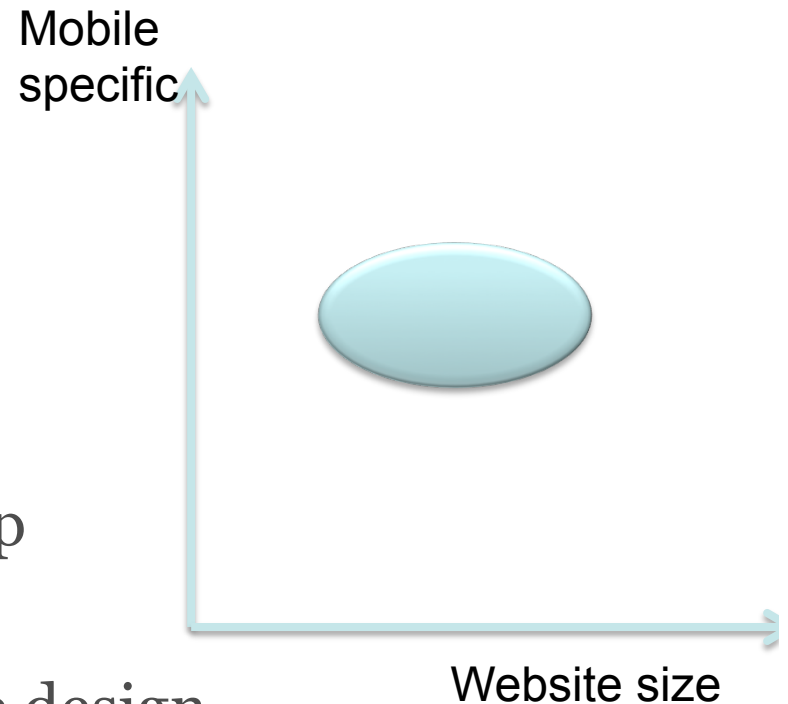
- Product information
- Contact details
- Use cases

No specific contextual functionality

- User tasks are similar as on desktop

Need for very high usability and nice design

- Good responsive design must attract customers



# Creating a Mobile and Desktop Template

Create a theme specific for mobile and desktop

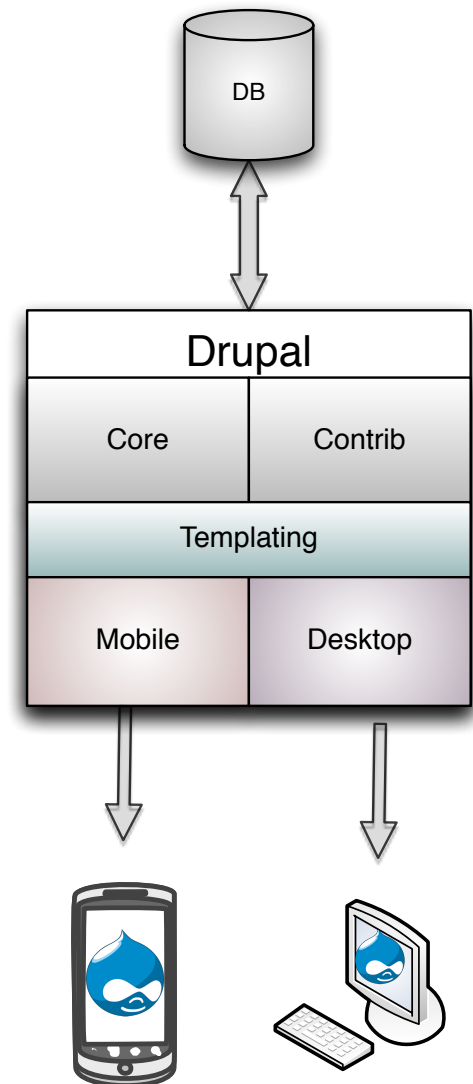
Share functionality across mobile and desktop



Easy to setup  
Large reuse of existing infrastructure  
Multi-content distribution



No mobile first approach  
Desktop-focused default theming behavior  
needs many changes to fit mobile context  
Hard to create real mobile experiences or contextual apps



# Use Case: Big Hospital

Highly-contextual mobile site

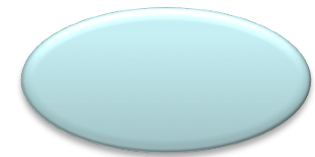
- Navigation through campus
- Make simple appointments through mobile
- Shared content store
- Strip down some desktop functionality

Complex Information Architecture

Reuse of content needed

- Doctors' contacts
- Divisions
- General information

Mobile specific



Website size

# Multisite installation

Create a theme specific for mobile and desktop

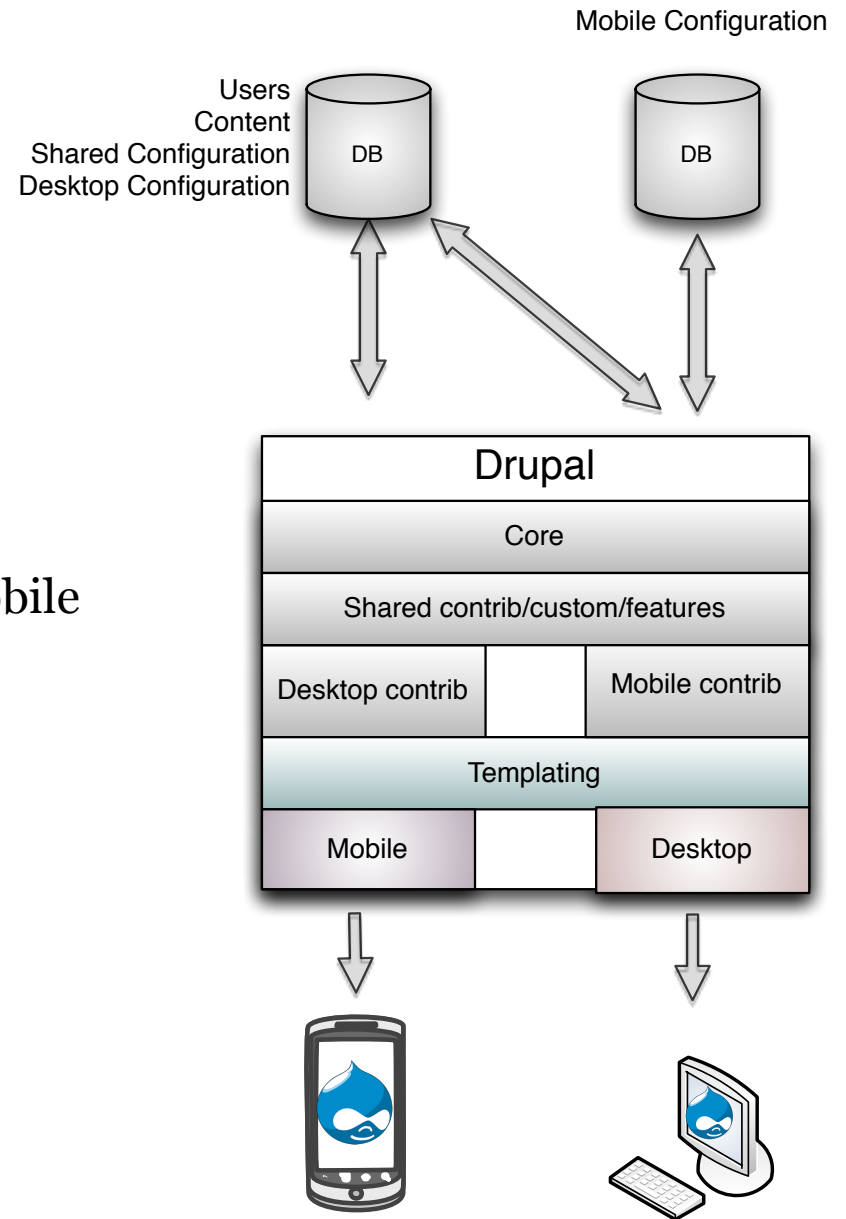
Maintain separate configurations for mobile and desktop



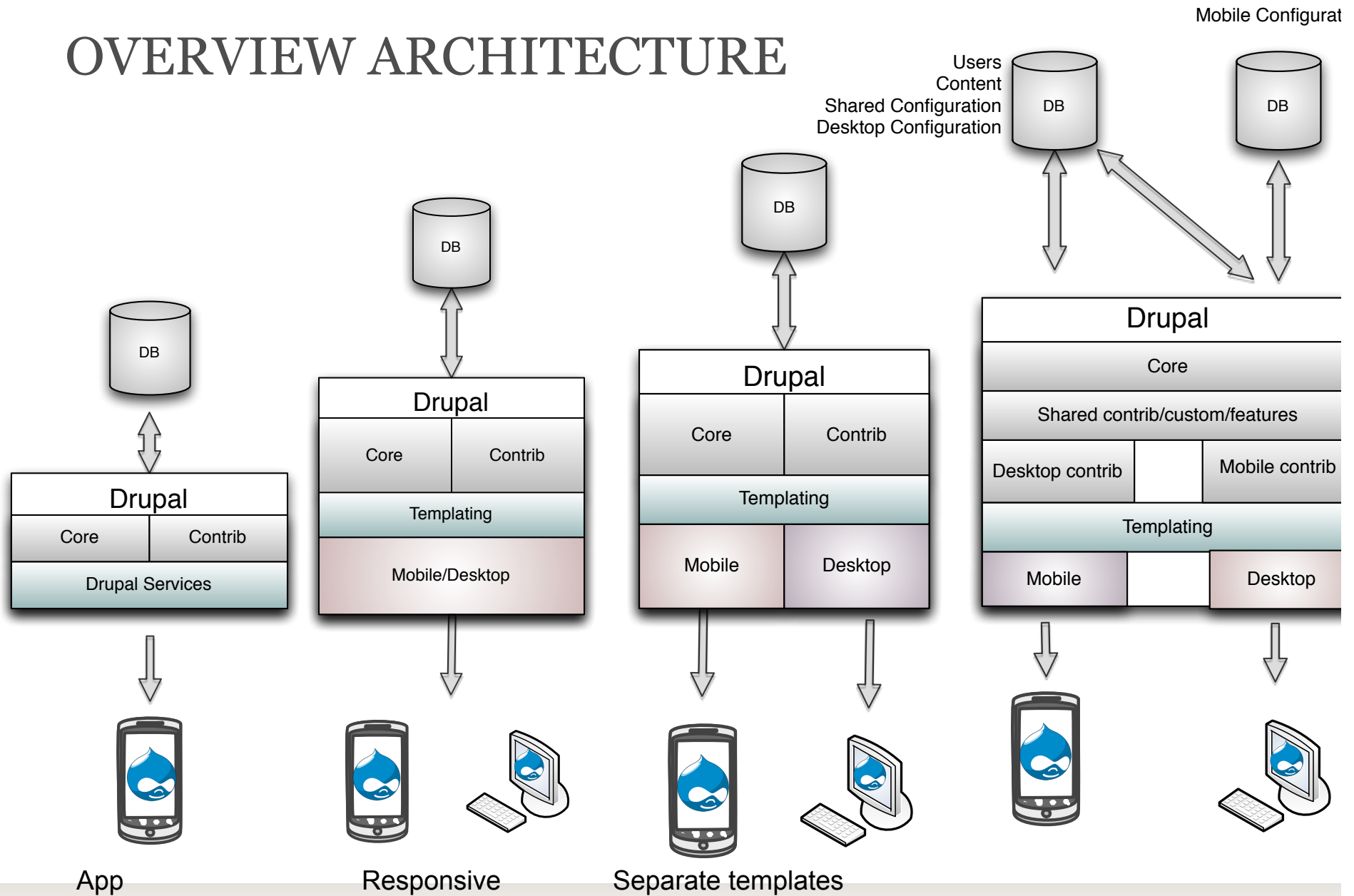
Room to create a highly-optimized mobile experience  
Large reuse of existing infrastructure  
Multi-content distribution



Harder to setup and maintain



# OVERVIEW ARCHITECTURE

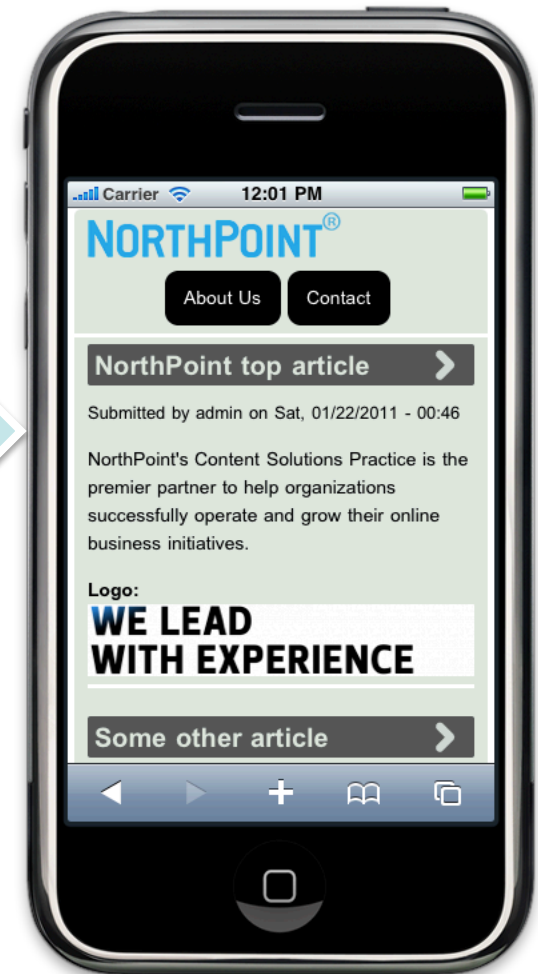
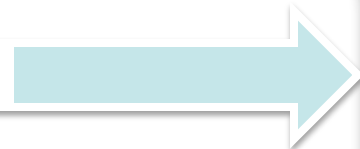
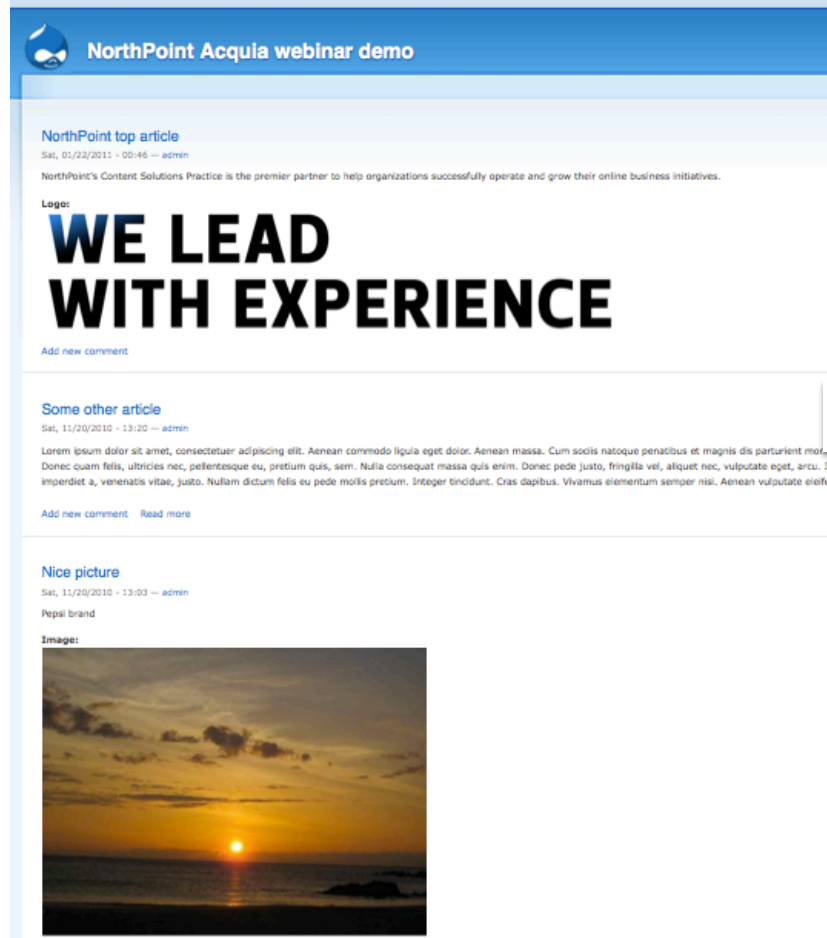




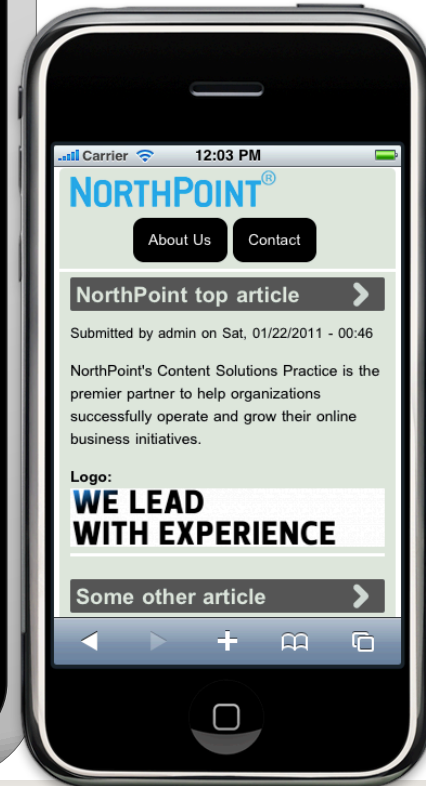
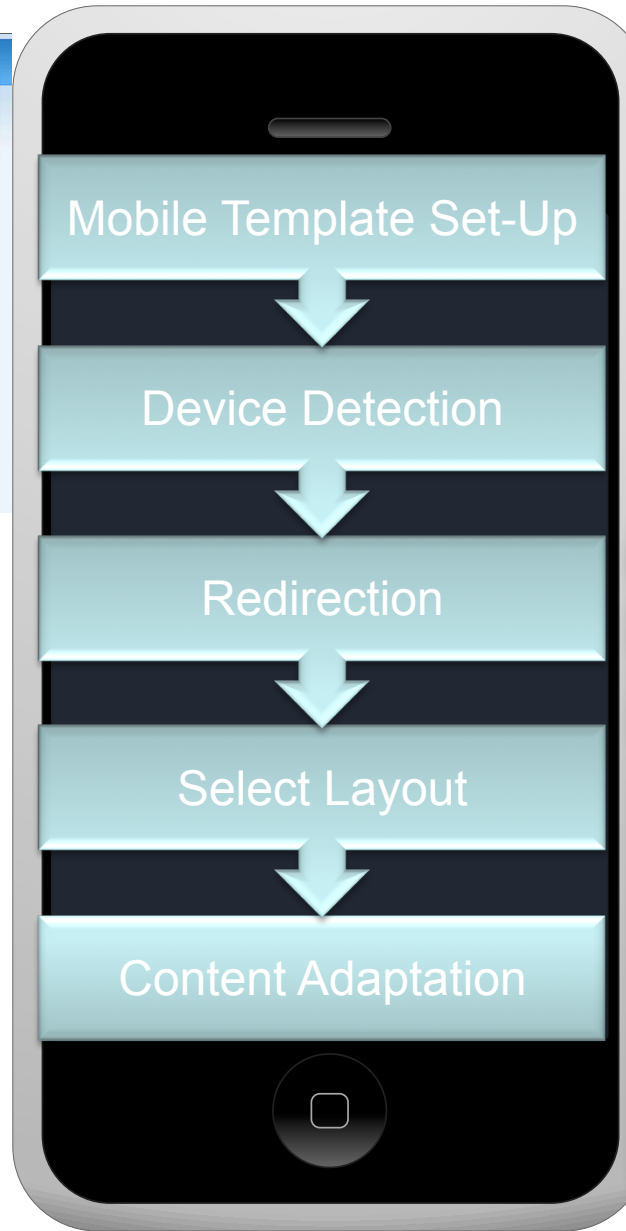
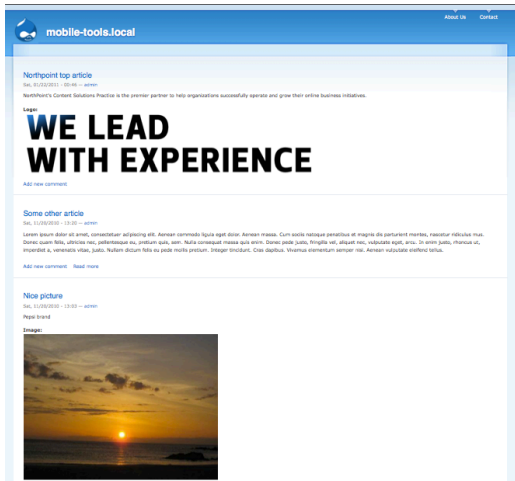
Step-by-step approach

# IMPLEMENTATION: CREATING THE MOBILE SITE

# STEP-BY-STEP: FROM DESKTOP TO MOBILE







# Mobile Tools

[http://drupal.org/project/mobile\\_tools](http://drupal.org/project/mobile_tools)

Basic Functionality

Device detection

Device redirection

Theme switching

Detection of device groups

Mobile user roles

Force full view | mobile

Set custom homepage

Custom number of FrontPage r

Hide mobile browser scrollbar

Viewport header

Provide mobile build modes

Provide mobile contexts

Provide panel context

## Mobile Tools

[View](#) [Git instructions](#) [Edit](#) [Revisions](#) [Maintainers](#)

Posted by [twom](#) on March 28, 2009 at 12:41am

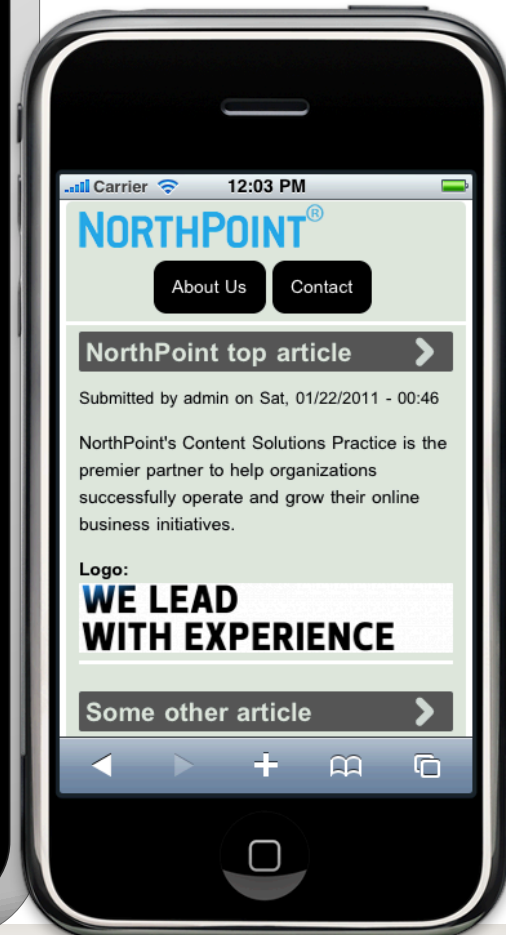
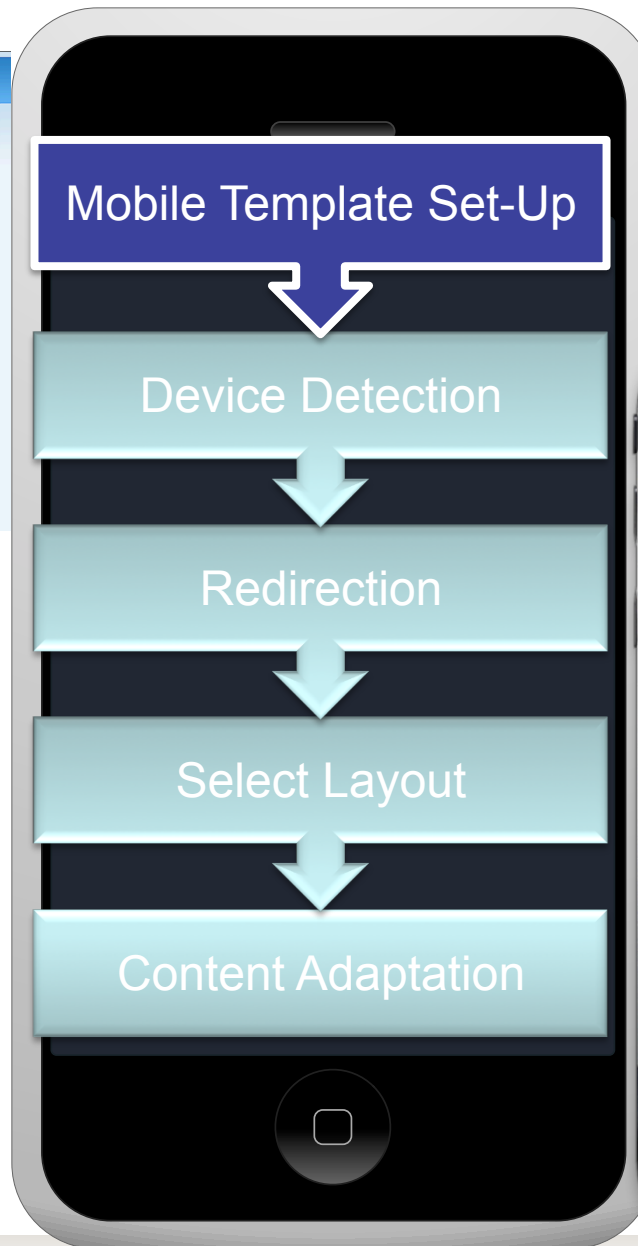
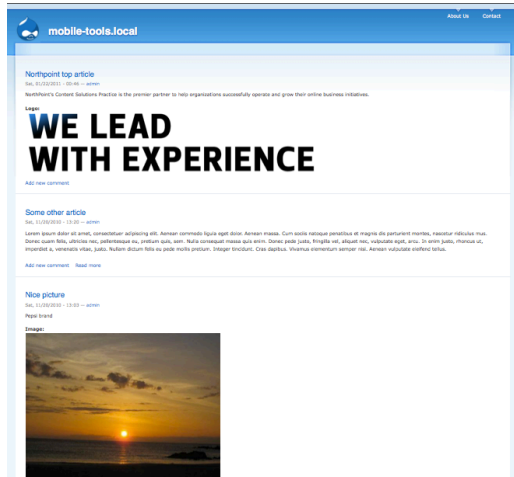
**Mobile Tools in in active development. We started a new 2.x branch that will hold the future developments for D6 and D7!**

The Mobile Tools module provides Drupal developers with some tools to assist in making a site mobile.

This functionality of the module contains:

- Detection of the user agent: is the user accessing from a mobile device, or from a desktop device. Support for third party modules is possible. Currently following modules can take over device detection:
  - [Browscap](#): based on [Browser detection](#)
  - [Wurfl](#): based on [Device detection](#)
- Automatic redirection to the mobile site
- Automatic theme switching, based on device type (iPhone, Android, BlackBerry, ... )
- Integration with [Panels](#) through a [Ctools](#) plugin and for [Node Displays](#).
- Notification for mobile users that a mobile site is available when they are looking at the desktop site





# Mobile Template

Create your own mobile theme or start from existing contributions



Fusion Mobile



Nokia Mobile



jQuery Mobile



A Cloudy Day Mob

# Using Mobile Tools to configure mobile theme

The screenshot shows the 'Mobile Tools' configuration interface. At the top, there are tabs for 'Mobile Tools', 'Notification / redirection', 'Theme Switching' (which is active), and 'External modules'. Under the 'Theme Switching' tab, the 'Theming configuration' section is expanded. It contains a text block explaining that a variation of the current theme can be assigned to all mobile devices. Below this, there are three radio button options for 'When do you want to switch themes:': 'No theme switch', 'Switch theme for a mobile device' (selected), and 'Switch theme based on the URL'. A blue callout bubble labeled '1' points to the 'Switch theme for a mobile device' option with the text 'Tell when to switch theme'. Below the radio buttons, there is a text input field for 'Mobile theme:' with 'northpoint\_mobile' selected. A blue callout bubble labeled '2' points to this field with the text 'Select the mobile theme'. Further down, there is a section for 'Additional mobile specific theming configuration' with two checked checkboxes: 'Automatically hide address bar' and 'Add Mobile Tools header'. A blue callout bubble labeled '3' points to the 'Automatically hide address bar' checkbox with the text 'Additional mobile headers'. To the right of the configuration panel is a preview of a mobile device (a smartphone) displaying the 'NORTHPOINT' mobile theme. The phone screen shows the 'NORTHPOINT' logo, 'About Us' and 'Contact' buttons, a 'Northpoint top article' section with a submit date, and a 'WE LEAD WITH EXPERIENCE' logo section.

**Mobile Tools** Notification / redirection **Theme Switching** External modules

Theming configuration

You can assign a variation of your current theme to all mobile devices. If you use this functionality you will have to manually create a second theme specific for mobile users. See [help](#)

**When do you want to switch themes:**

- ☐ No theme switch
- ☒ Switch theme for a mobile device
- ☐ Switch theme based on the URL

Choose one of these methods. \*This is not recommended since it requires a second theme.

**Mobile theme:**

northpoint\_mobile

Select your default mobile theme. You can specify a different theme for different devices.

**Additional mobile specific theming configuration**

- ☒ Automatically hide address bar
- ☒ Add Mobile Tools header

Enabling this injects some line of javascript to hide the address bar when the page is loaded

Add mobile specific headers into the header tag. This includes viewport, touch-icon, HandheldFriendly, ... See them

**Tell when to switch theme**

**Select the mobile theme**

**Additional mobile headers**

**NORTHPOINT**

About Us Contact

Northpoint top article

Submitted by admin on Sat, 01/22/2011 - 00:46

NorthPoint's Content Solutions Practice is the premier partner to help organizations successfully operate and grow their online business initiatives.

Logo: **WE LEAD WITH EXPERIENCE**

Some other article

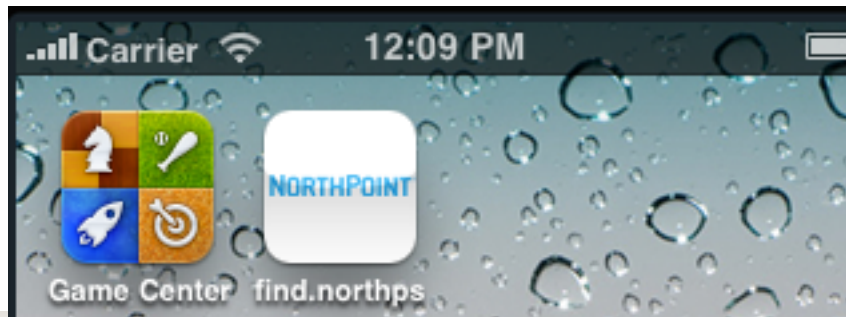
# MOBILE-SPECIFIC HEADERS ADDED BY MOBILE TOOLS

```
<meta name = "viewport" content = "user-scalable=no, width=device-width, maximum-scale=1.0" />
```

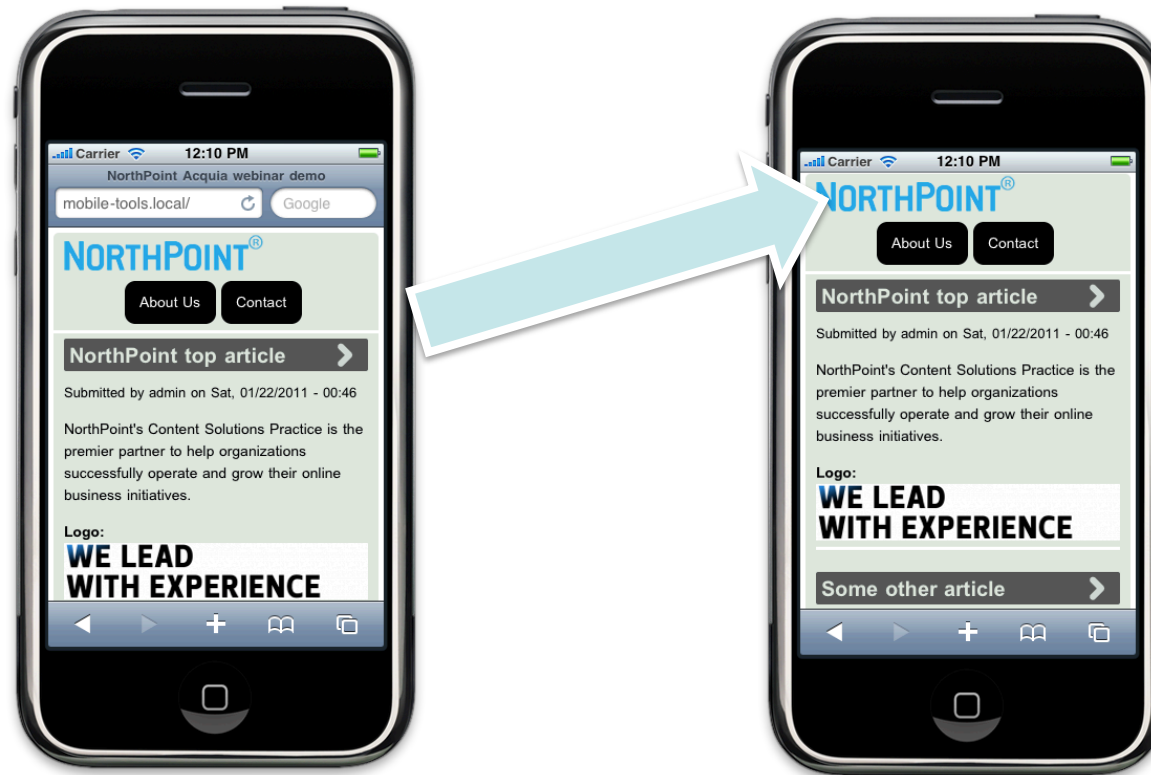


- Default iPhone viewport is 900px
- Set viewport to device width
- Do not allow zooming

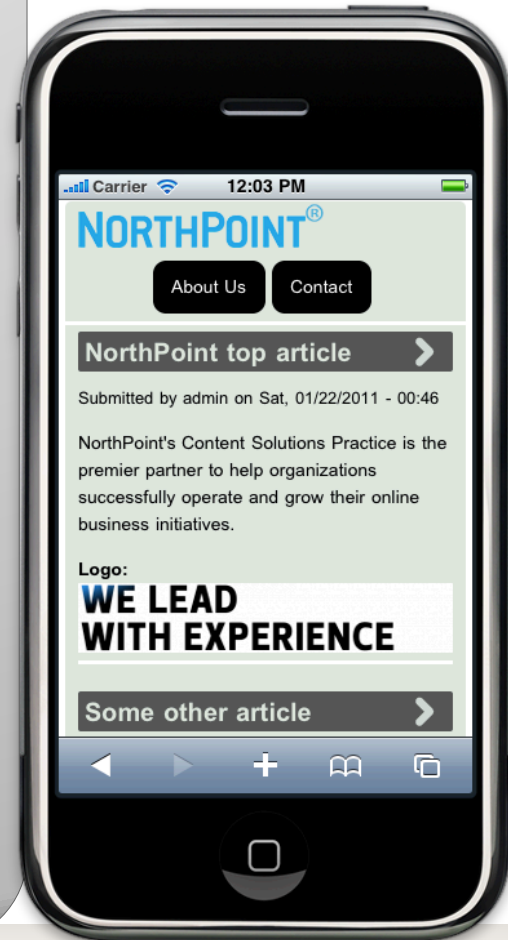
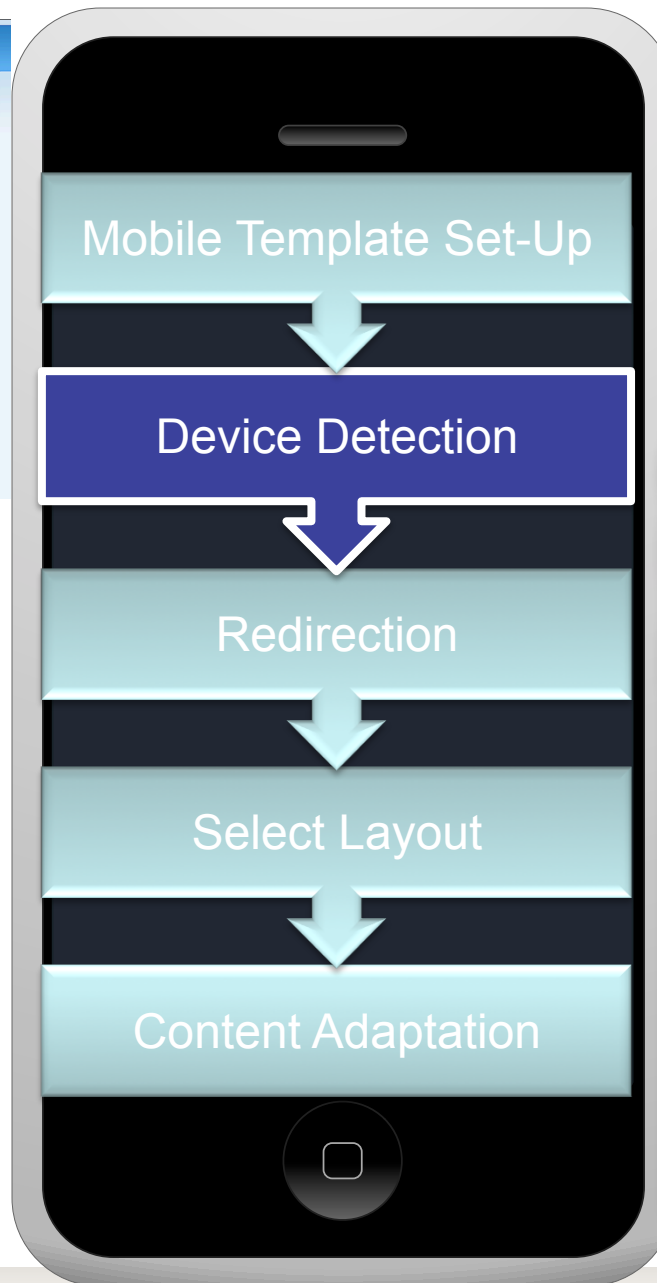
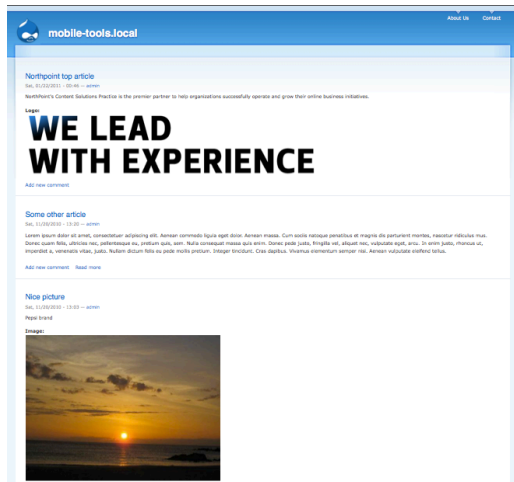
```
<link rel="apple-touch-icon" href=""sites/all/themes/northpoint_mobile/webclip.png>
```



# HIDE SCROLLBAR USING JAVASCRIPT WIDGET









# DEVICE DETECTION: READ USER AGENT STRING

## Simple detection

Parse user agent string and search for “iPad”, “Android”, “Nokia”, “Blackberry”

Only information about the device manufacturer

## Advanced detection

User device library to match user agent string with

Contains more information like Screen Size, device capabilities

<http://drupal.org/project/WURFL>

# Mobile Tools Configuration

**Mobile Tools**[Notification / redirection](#)[Theme Switching](#)[External modules](#)

External detection modules

You can let other modules do the device detection or detect if your site is being mobilised.

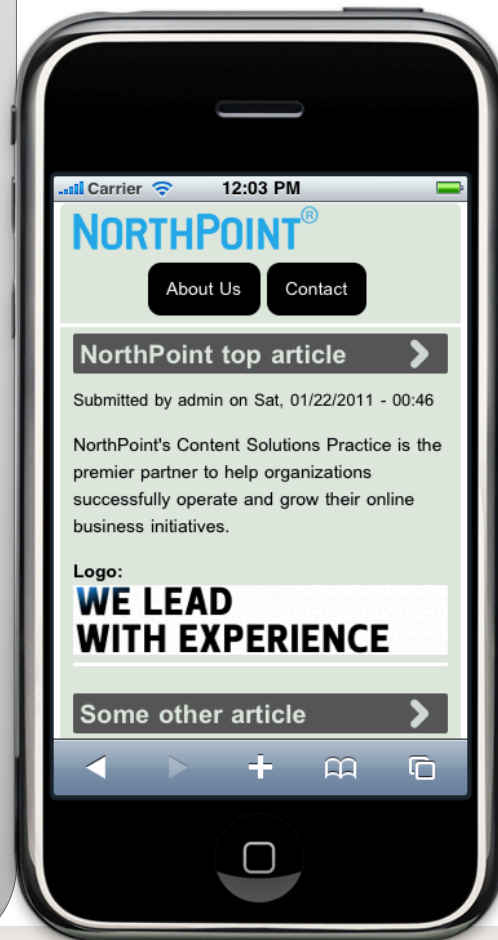
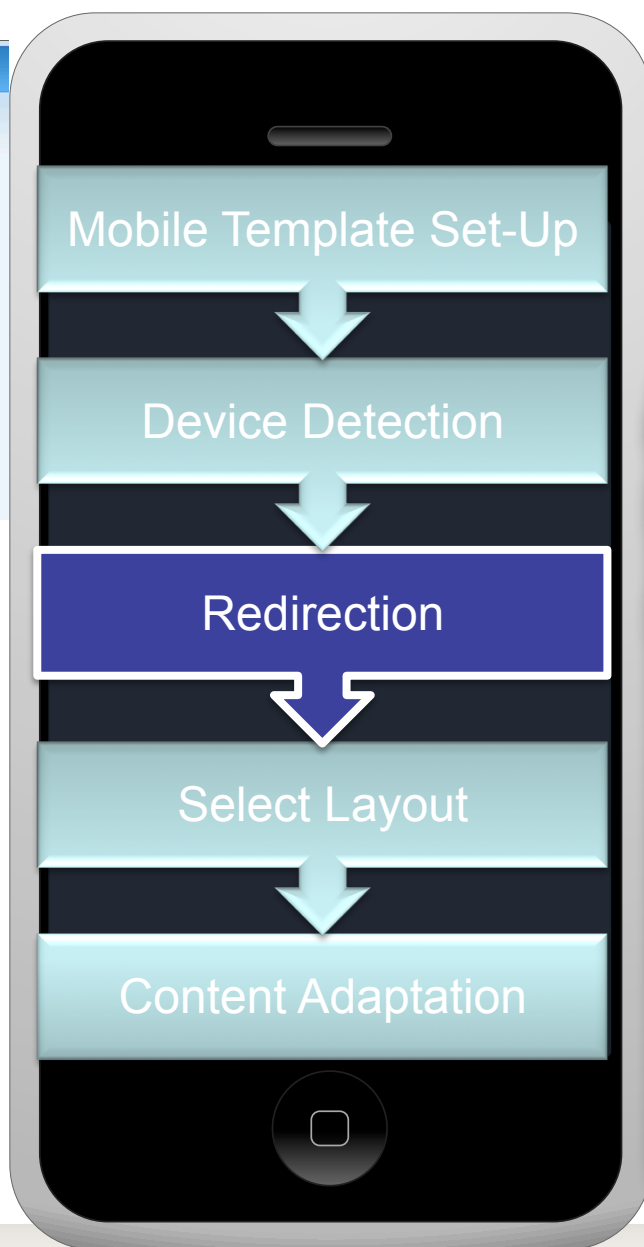
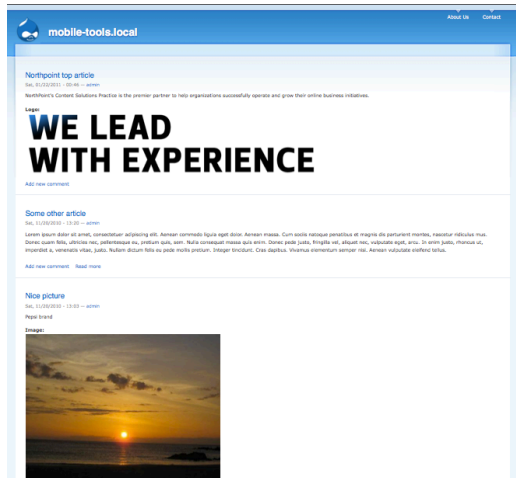
**Device detection module:**

☐ WURFL Group Webkit

☐ Wurfl

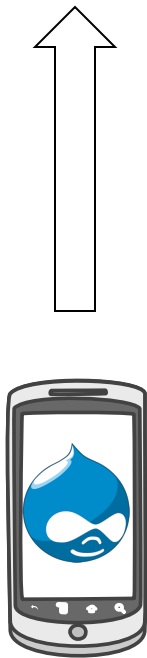
☒ Mobile Tools

Choose which module is in charge for detecting if the visiting device is a mobile device. The Mobile Tools provides a stand

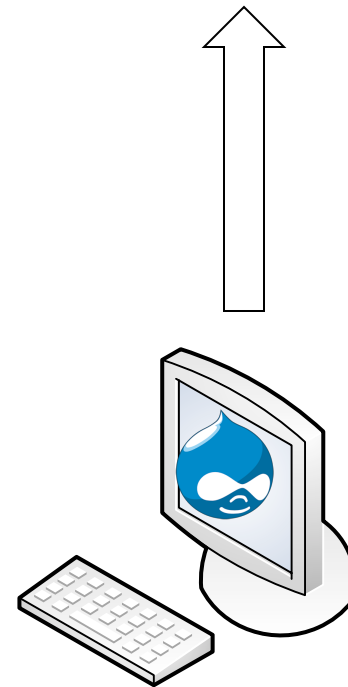


# REDIRECTION SCHEME SHOULD BE SIMPLE

<http://m.domain.tld> or  
<http://www.domain.mobi>



<http://www.domain.com>



# Configure Redirection

## General configuration

Enter the mobile and desktop url for your site. If both urls are equal there will be no redirection, but only theme switching. Go to "theme switching" to configure the theme.

### Mobile URL:

Give the name of your mobile site. It is recommended to use the convention of m.domain .com or www.domain.mobi

### Desktop URL:

Give the name of your regular website.

1

Add URLs

## Redirection options

☐ Enable automatic redirection of the mobile user

Mobile visitors will automatically be redirected to the mobile site. But mobile users can also -- if they remember that the user does not want to be redirected. To undo, send the user to /gomobile

### Redirection cookie (seconds):

This field is only used when using the ?device= setting. This is the lifetime of the cookie that determines

### exception type:

- ☒ Do not redirect from the following pages  
☐ Do only redirect from the following pages

### redirection exceptions:

Give the paths to pages that should not be redirected. Put each path on a separate line. The '\*' character

2

Enable Redirection

3

Add Exceptions

# Override Redirection

Give users control

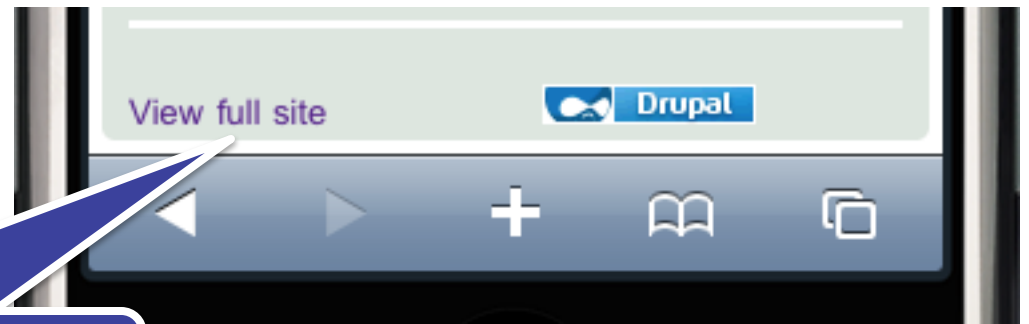
Add override arguments to your URL

?device=desktop

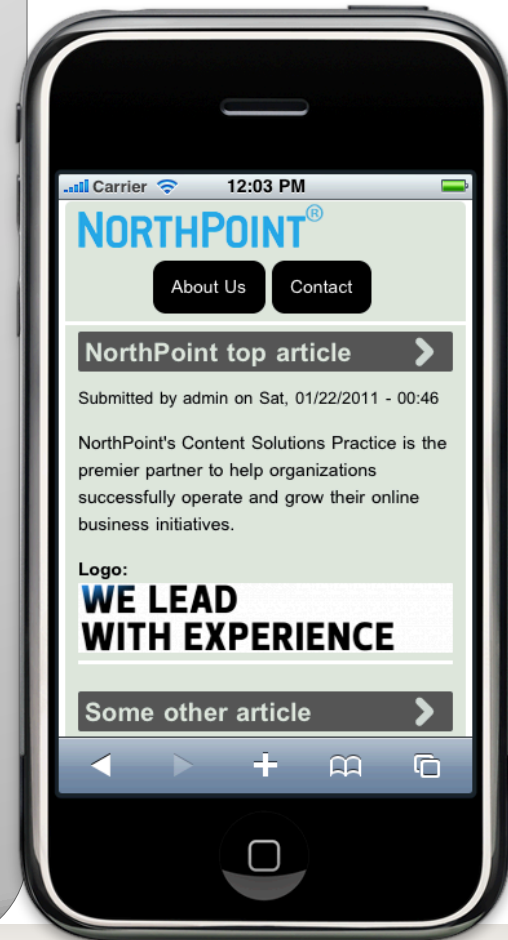
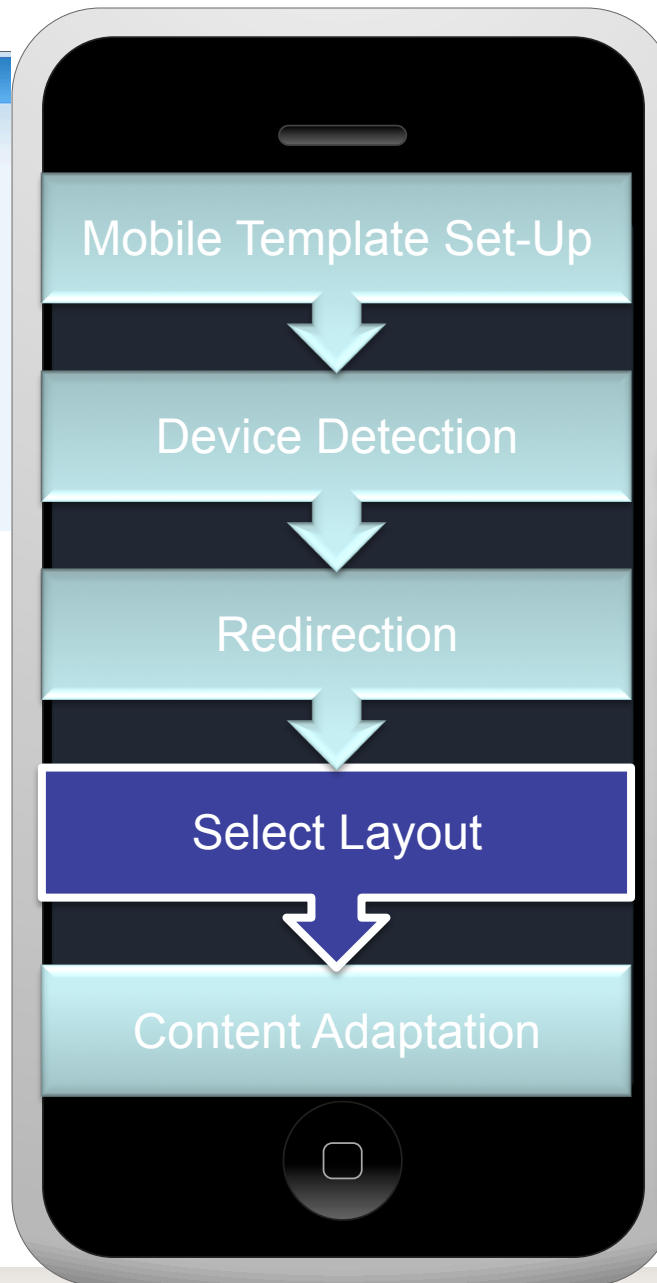
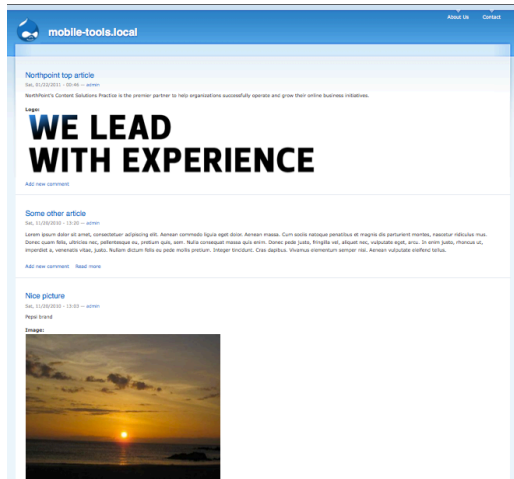
?device=mobile

?device=auto

?device=<device-group>



[http://mobile\\_tools.local?device=desktop](http://mobile_tools.local?device=desktop)



# CONFIGURE MOBILE LAYOUTS: BLOCKS

Using Blocks configuration page

Configure blocks appearing in your Desktop regions

Configure blocks appearing in your Mobile regions

Desktop

Garland Fusion Core

This page provides a drag-and-drop handle under the blocks button at the bottom of each block. Themes implement the same blocks button at the bottom of each block.

Click the *configure* link next to each block.

Block

Left sidebar

No blocks in this region

Right sidebar

No blocks in this region

Content

No blocks in this region

Header

No blocks in this region

Mobile

Northpoint Mobile Fusion

## Blocks

Block

header

No blocks in this region

primary menu

+ Menu

content top

No blocks in this region

content

No blocks in this region

footer

+ Mobile Tools message block

+ Powered by Drupal

Disabled

 **consumersearch**  
love what you buy

**About.com**



# CONFIGURE MOBILE LAYOUTS: CONTEXT MODULE

## Conditions

Trigger the activation of this context

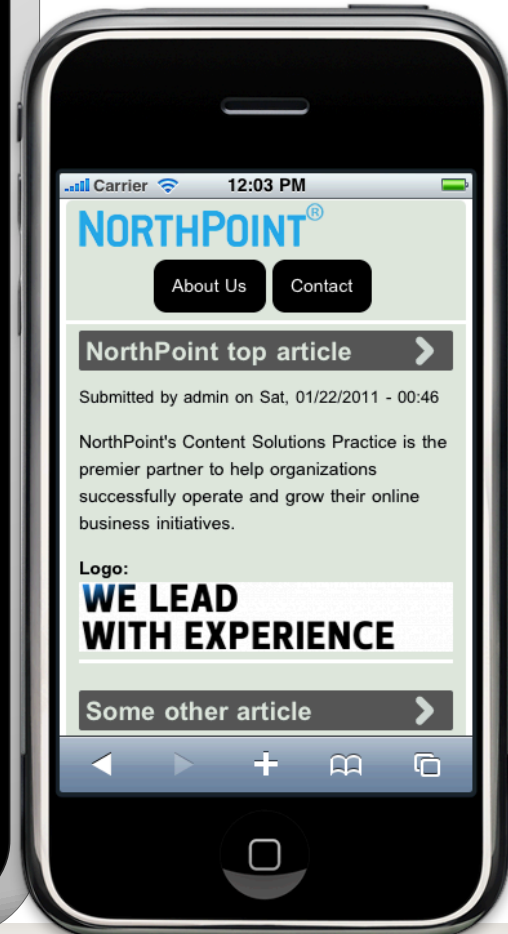
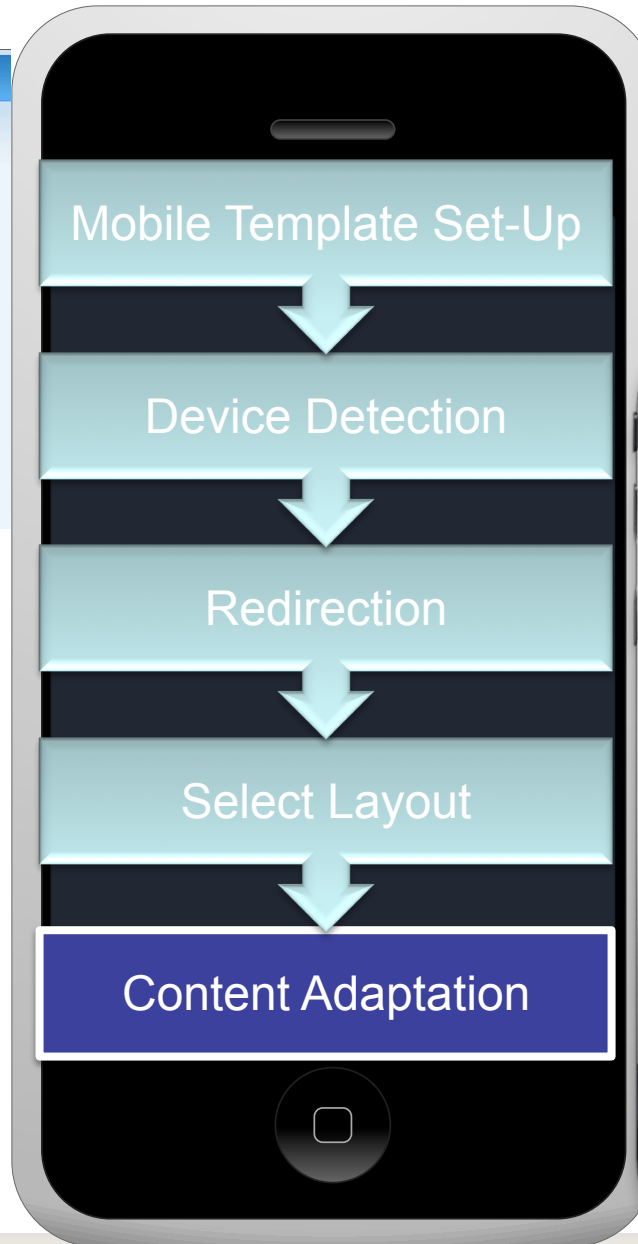
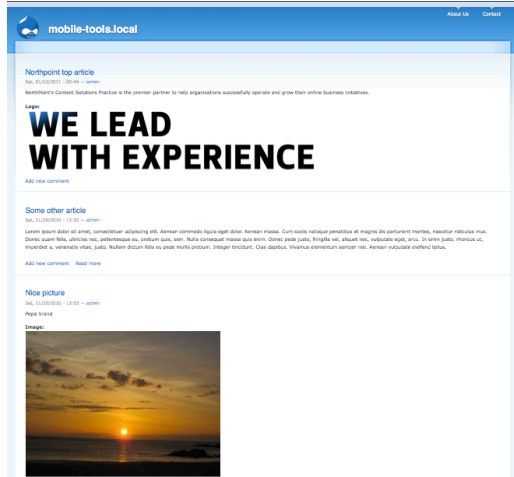
<Add a condition>

## Context for mobile devices

### Context for mobile devices:

- ☒ Mobile
- ☐ Desktop
- ☒ iPhone
- ☐ iPod
- ☐ iPad
- ☐ Android
- ☐ Opera Mini
- ☐ BlackBerry

Choose for which device type or device group this context must apply



# CONTENT ADAPTATION

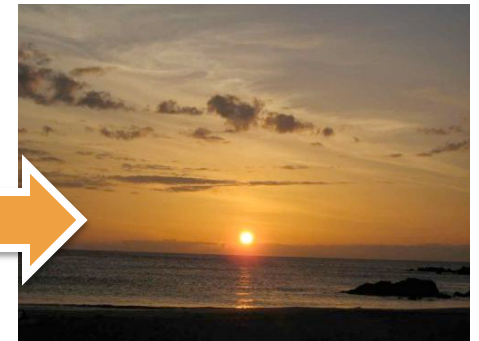
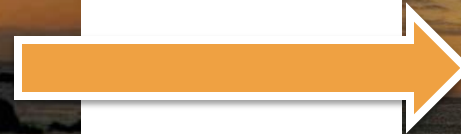
Different adaptations are possible for mobile devices

Video adaptation

Image resizing

Text summarization (e.g.: provide shorter versions)

Functional adaptation (e.g. reducing number of form fields)



# IMAGE RESIZING USING IMAGECACHE

[Home](#) > [Administer](#) > [Site building](#)

ImageCache  
presets

ImageCache

List

[Add new preset](#)

Manage ImageCache presets.

Preset Name	Storage	Actions			
<a href="#">desktop_brand_image</a>	Normal	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Flush</a>	<a href="#">Export</a>
<a href="#">mobile_brand_image</a>	Normal	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Flush</a>	<a href="#">Export</a>
<a href="#">mobile_brand_logo</a>	Normal	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Flush</a>	<a href="#">Export</a>

[Home](#) > [Administer](#) > [Site building](#) > [ImageCache](#)


ImageCache configuration for mobile  
logo

Edit preset: [mobile\\_brand\\_logo](#)

**Preset Namespace:**

The namespace is used in URL's for images to tell imagecache how to process an image. Please only use alphanumeric characters, underscores (\_), and hyphens (-) for preset names.

Actions

Action	Settings		
 Scale	width 300px	<a href="#">Configure</a>	<a href="#">Delete</a>

[New Actions](#)

# Configure your build mode

Home > Administer > Content management > Brand

**Brand** Edit Manage fields **Display fields**

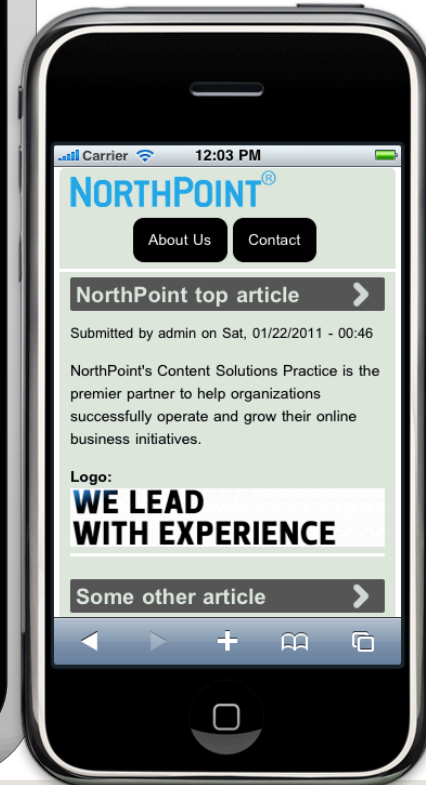
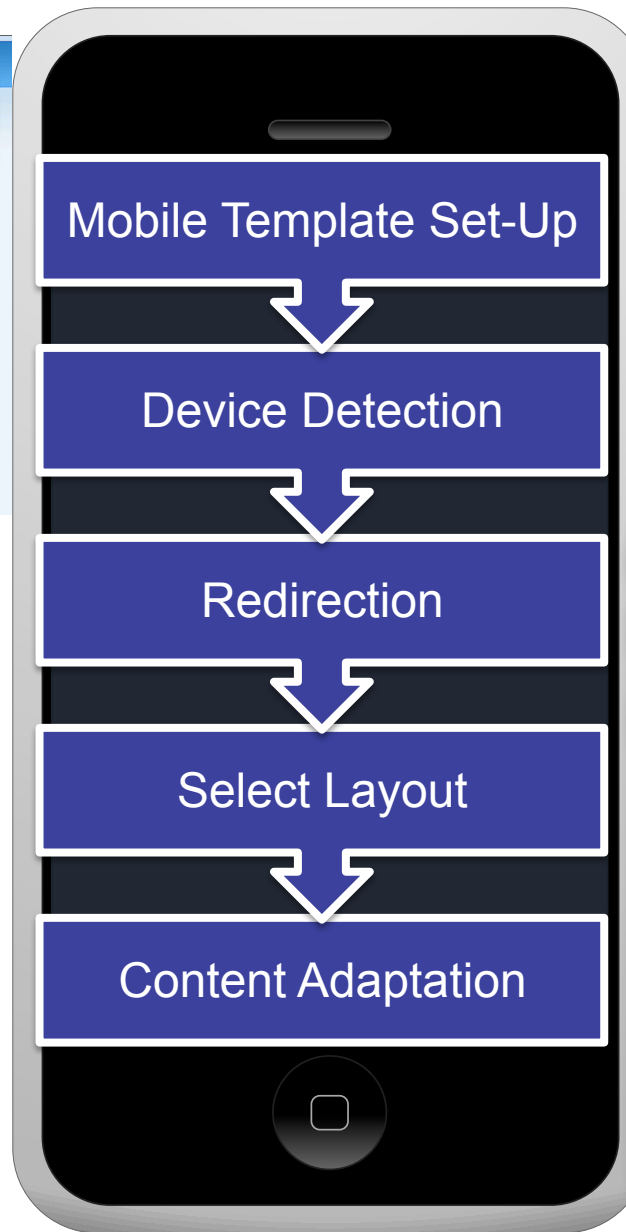
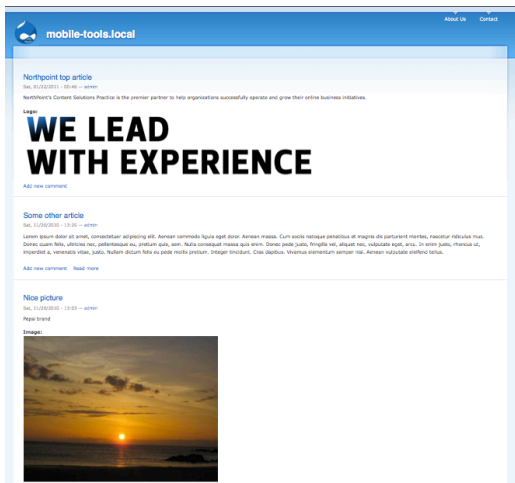
Basic Mobile Device RSS

Your settings have been saved.

Content type's fields and field labels should be displayed when it's viewed in teaser and full-page mode template.

Field	Label	Teaser	Exclude	Full node	Exclude
Logo	Above	Image	<input type="checkbox"/>	Image	<input type="checkbox"/>
Image	Above	Image	<input type="checkbox"/>	desktop_brand_image image	<input type="checkbox"/>

Save





# Q&A AND TESTING

# Testing

## Usability Testing

- Evaluate your designs and improve
- Test on task completion
- Evaluate usage



## Test all your targeted devices

### Simulators

- iPhone simulator /Android Simulator
- Blackberry Simulators
- Opera Mini Simulator

### Device banks

- Nokia Remote Access
- Commercial solutions available



## Performance Testing

Speeds can vary from 70-135 Kbits/s while new 4G standard will allow for peak values up to 100 Mbit/s





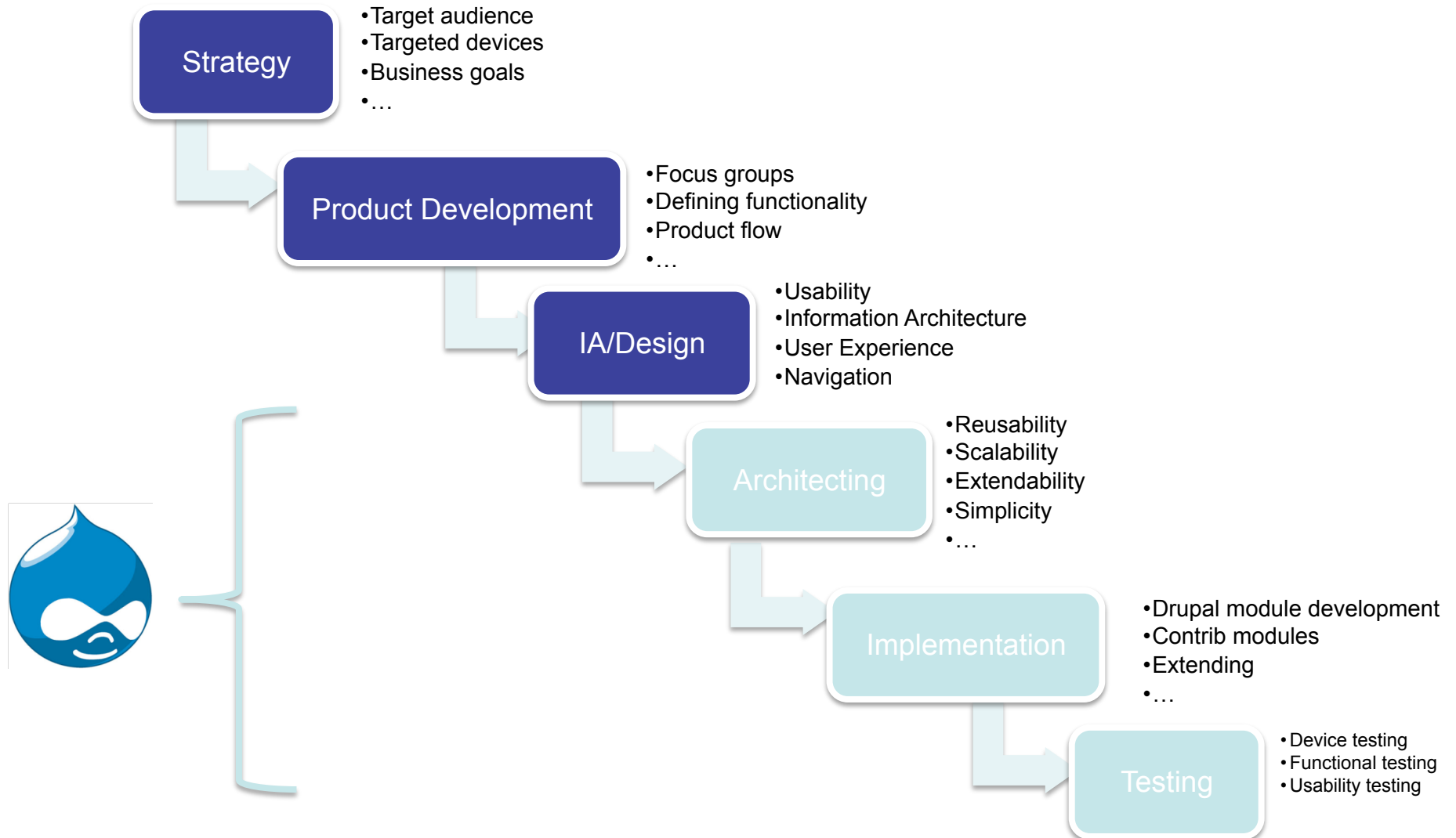
# Know your devices upfront!

Enables good client communication. No surprises at the end

Know what to develop for

Device	OS	Resolution	Browser	js	CSS-Gradient	css-rounded-corner	Fonts Replacement	Media Queries	Template
Iphone3G	iOS	320x480	Webkit						High end
iPhone4	iOS	640x980	Webkit						High end
Samsung Galaxy	Android	480x800	Webkit						High end
Tourch 9800	BB v6.x	360x480	Webkit						High end
Nokia C6	Symbian^3	360x640	Webkit						Low end
BB Pearl 9100	BB v4.6	360x400	BB 4.6						Low end
...	..								

# STAGES OF CREATING A MOBILE PROJECT



# QUESTIONS

Thank you

Contact