



Noroff

School of technology
and digital media

Technical Report

Functional Specification

Frode Karlsen

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1. Summary

For the project exam, I am going to make a microsite for NASA. The main focus of the site is the Hubble Telescope and its 30th anniversary, which is this year. The page will mostly contain stunning images that the Hubble Telescope has taken, videos and interesting articles published by NASA. I am going to work on a concept that will broaden the target audience of the page. An example of this is that I am going to use stunning images that people can use as their backgrounds on their smart phones, tablets and PCs.

This report includes a project plan, functional specification and a Gantt chart creation process for this project.



2. Body

2.1 Introduction

Since I am the only one that is going to work on this project, I did not create a team, like we did in the previous task where we created a Gantt chart.

2.2 Main

i. Planning

To start with I created user stories and gave them all an ID from 1 to 26:

STORY ID	AS A < TYPE OF USER >	I WANT TO < PERFORM SOME TASK >	SO THAT I CAN < ACHIEVE SOME GOAL >
1	Visitor	Be able to contact you	Ask questions
2	Visitor	Have neat design on the page	Get enticed to spend more time on your site
3	Visitor	See nice looking images	Get excited about the pages content
4	Web dev	Have top notch SEO	Reach more visitors through Google searches
5	Web dev	Make the site secure	Make the visitors feel safe while visiting the site
6	Visitor	Have easy access navigation	Easily navigate through the content
7	Visitor	Have promotional videos	Get facts about the Hubble Telescope
8	Business owner	Display a promotional video	Ensure company core values comes across
9	Business owner	Incorporate a twitter and RSS feed	Reach visitors through social media
10	Web dev	Use simple language	Ensure the page is user friendly
11	Visitor	See a subscription feature	Submit my email address to get newsletters from you
12	Visitor	Have a search feature	Locate what I am looking for
13	Visitor	Share content	Generate sharing link to others
14	Company stakeholder	Have company core values displayed	Ensure our customers knows what we're all about
15	Visitor	Have a image gallery section	Browse epic photos from space
16	Visitor	See the history of Hubble Telescope	Review the history
17	Visitor	Have the page load quickly	Get a professional impression of the website
18	Visitor	Have an appealing look to the website	I would like to spend more time on the site
19	Visitor	See high quality content	I would get engaged with what the site has to offer
20	Web dev	Focus on WCAG standards	Ensure the page is available for everyone
21	Web dev	Have performance parameters	Ensure the page loads quickly
22	Web dev	Have revoverability of the project	Reduce losses in case of some disasters
23	Visitor	Have a secure site	Feel safer when surfing your site
24	Visitor	See a responsive site	Surf your site from various applications
25	Web dev	Be easy to maintain	Easily perform changes and updates to the site
26	Business owner	Have focus on the 30th anniversary	Spread the word of the importance of the Hubble Telescope

The general idea in the planning phase was to get these sorted and divided, but to keep things simple I put the development plan in four initial phases: planning phase, design phase, development phase and testing & launch. Instead of having all microtasks listed inside the Gantt



chart, I decided to make them less specific in my task list, but note the smaller tasks into the 'schedule' section of the Gantt to describe what should be done during each task section. With that in mind I created 6 main tasks and split them up into smaller tasks into the Gantt chart:

- **Planning:** functional specification, gantt chart.
- **Research:** general research, target audience, card sorting, information architecture, personas, scenarios and storyboards.
- **Design:** general research, layouts and images, fonts and colors, navigation design and interaction design.
- **Wireframe:** wireframe creation and prototyping.
- **Programming:** research & content creation, front page (HTML&CSS base), image of the day page (HTML&CSS base), image gallery & video page (HTML&CSS base), article page (HTML&CSS base), choosing relevant API, JS coding, HTML review, CSS review, @media coding.
- **Implementation:** bugfix, user testing, rollout and report writing.

I have also created a weekly schedule from week 1 to 5 and split up into daily workplan for each smaller task. Upon completion the scheduled task will get a red color when done to display progress of the project, which is displayed in the Gantt chart provided in this deliverable task.



ii. Functional Specification

FUNCTIONAL SPECIFICATION
The system must (statements)
Allow customers to get in touch via a contact form
Allow users to easily browse through images and videos
Allow users to download images to keep as backgrounds for their devices
Have an easy access navigation menu
Allow text and numeral inputs in forms
Use appealing color palette and fonts that match the target audience
Apply top notch SEO to get more visitors to the site
Display a promotional video for the Hubble Telescope
Maintain focus on 30th anniversary for the Hubble Telescope
Comply with the legal requirements of a business and follow regulations
Use simple language to make it user friendly and easy to navigate through
Have a newsletter subscription feature
Have a search feature
Have a share functionality to allow users to share stuff via social media
Have a sorting option for images (popularity, date/year etc)
Have a news section for recently posted items, articles, images etc
Incorporate RSS and Twitter feed to reach target audience in social media

NON-FUNCTIONAL SPECIFICATION
The system must (statements)
Have performance parameters
Have recoverability
Allow forms to have text input and styled buttons (cta)
Be secure (https)
Have good content management systems applied
Have great consideration for WCAG to make it available for more people
Scale correctly for various screensizes
Be responsive
Have cookies and privacy policies displayed on pages
Be easy to maintain
Be reliable
Have good capacity



Themes

1. The Hubble Telescope's 30th anniversary

This is the main goal of the microsite. I simply want a site that celebrates the 30 years of the Hubble's existence. The microsite will contain interesting articles, but in particular have a clear focus of the fantastic images the telescope has taken and details behind the images.

2. Social media presence

This is another focus area of the microsite. Here I plan to have an RSS feed on the page and twitter feed directly from NASA. Visitors are also allowed to share stunning images on their Facebook page, download images as backgrounds to their smart phones/tables/PCs and rate images. Another idea to spread the page through social media would be to have quizzes with prizes such as NASA t-shirts and other apparel.

3. Display company core values

NASA is all about integrity, safety, teamwork and excellence. These core values are set in stone to ensure successful missions. However, they are in the end all about exploration, curiosity and education. Their work is a study of the universe we live in and space exploration. I will focus on finding our inner child via imagination. Who hasn't pretended to be an astronaut as a kid?



The Hubble Telescope's 30th anniversary

Feature	Website Design
<h2>Epics</h2> <hr/> <ul style="list-style-type: none">• As a visitor, I want an appealing website, so that I will get engaged by its content.• As a visitor, I want engaging content, so that I will stay longer on the site. <h2>User Stories</h2> <hr/> <ul style="list-style-type: none">• As a visitor, I want nice images displayed, so that I will get enticed to browse through the content on your website.• As a web dev, I want a nice looking website, so that we can represent NASA in the best way possible to the public.• As a web dev, I want a nice layout that emphasises the most important parts of the pages.• As a web dev, I want the company colors to shine through, so that it feels familiar to the users.• As a web dev, I want to see easy to read fonts, but still make it familiar to NASA, to ensure people understand who we are representing here.	

Epics

- As a visitor, I want an appealing website, so that I will get engaged by its content.
- As a visitor, I want engaging content, so that I will stay longer on the site.

User Stories

- As a visitor, I want nice images displayed, so that I will get enticed to browse through the content on your website.
- As a web dev, I want a nice looking website, so that we can represent NASA in the best way possible to the public.
- As a web dev, I want a nice layout that emphasises the most important parts of the pages.
- As a web dev, I want the company colors to shine through, so that it feels familiar to the users.
- As a web dev, I want to see easy to read fonts, but still make it familiar to NASA, to ensure people understand who we are representing here.



Feature	Search
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Epics

- As a visitor, I want a search functionality, so that I can quickly navigate through the pages content.

User Stories

- As a web dev, I want a search icon displayed in the navigation, so that it's both easy to locate and practical for the users.
- As a visitor, I want a search functionality, so that I am able to search through specific content of the site to find what I am looking for.

Feature	Navigation
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Epics

- As a visitor, I want a navigation menu, so that I can easily browse through your pages.
- As a web dev, I want a navigation menu, so that our website looks professional.

User Stories

- As a visitor, I want a nice looking navigation menu, so that I swiftly can browse through the various pages/sections of the site.
- As a web dev, I would like the navigation menu to include a search bar so that users can swiftly search through the pages contents.
- As a web dev, I want a hamburger menu for mobile and smaller resolutions, in order to maintain easy navigation on the site.



Feature

Contact Form

Epics

- As a visitor, I want a contact form, so that I can get in touch with you in case I have any questions.

User Stories

- As a visitor, I want a contact form, so that I can get in touch with you if I have any questions or leave feedback.
- As a web dev, I would like our visitors to be able to contact us, so that we are in better touch with the customer base.
- As a visitor, I would like confirmation that the message have been sent and average response time, so that I can be notified about this.



Social Media Presence

Feature	Image of the day
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Epics

- As a visitor, I would like an image of the day section, so that I can see fantastic images every day on your page.

User Stories

- As a web dev, I want the Image of the Day section to be available in the navigation, for easy access to our visitors.
- As a visitor, I want to be able to share and download these images, so that I can share them through social media, or use them as a background on my phone/tablet or PC.
- As a web dev, I want to have an API call made for this section, in order to ensure that the page updates itself daily via a JavaScript.

Feature	Quiz
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Epics

- As a visitor, I would like a quiz section, so that I can take part on quizzes on your page.
- As a web dev, I would like to create a quiz to better interact with the visitors.

User Stories

- As a web dev, I would like to make a quiz for our visitors with prizes such as NASA t-shirts and apparel to spread the word about the page.



Feature	Twitter/RSS Feed
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Epics

- As a visitor, I would like to see twitter and RSS feeds with news from NASA.

User Stories

- As a web dev, I want to implement twitter and RSS feeds to better interact with our visitors to keep them posted on news from NASA.
- As a visitor, I want RSS/Twitter feeds to keep up to date with news from NASA on your site.

Feature	Social Media Links
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Epics

- As a visitor, I want easy access to social media links, so that I can easily locate NASA on social media.

User Stories

- As a web dev, I would like to provide easy to find social media links, so that visitors can review NASAs social media accounts.



Company core values

Feature	Promotional Video
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Epics

- As a visitor, I would like a promotional video, so that I can see what the Hubble Telescope is all about.

User Stories

- As a web dev, I would like to have a promotional video on display, so that visitors easily can see a video what the Hubble Telescope is all about.

Feature	History
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Epics

- As a visitor, I would like to read about the Hubble Telescope's history, so that I can see where it all started.

User Stories

- As a web dev, I would like to give our visitors the opportunity to see the history of the Hubble Telescope through a visual timeline.



iii. Gantt creation

As for the Gantt chart and the creation process, I simply revamped the one I created for our CA in the Project Methodology course. I changed up the colors, but as for the main structure and design it remained the same.

I put up estimations as per your example from the Project Exam Deliverables/Milestones:

[illegible]

The red color inside the schedule indicates finished tasks, while the blue is unfinished tasks. This makes the project easy to follow in regards to progression. I have not taken any days off, but I usually take it slow on Monday. I also have my own birthday on the 6th of May, while my father have his on the 16th of May, so those will probably be a bit slower in terms of workload. The rest is pretty self explanatory to be honest.

iv. Intellectual property

In order to ensure that the intellectual properties would be well protected, these are the steps I am going to take:

- Let people know that the content I am reciting are copyrighted by NASA, and refer to their guidelines about usage. I am making this as a copyright print on every page in a footer section (where applicable)

2.3 Conclusion

This report is showing my process throughout the planning phase of the project. It includes functional specification and a project plan (Gantt chart), themes and features. The project will get more detailed as I move on to the next two phases, which is research, design and wireframe. Once all that is done the programming will start. Finally I have set aside time to testing, rollout and report writing.



3. References

Gant chart downloadable via GitHub - (Gantt.xlsx):

https://github.com/lamMattDamon/project_exam1/tree/master/functional%20spec

