



# JonJu Tech Ltd.

(Read the JonJu’s ‘Disclaimer’ (end of document) before using/reading this document)

**WP type:** Business

**Date:** 5<sup>th</sup> February 2021

**Title: SEO (Search Engine Optimisation)**

**Contents**

What it is all about.....	2
Quick Learn .....	2
Rigour.....	4
Further Investigation .....	12
Disclaimer.....	13
Definitions.....	13

Without Prejudice

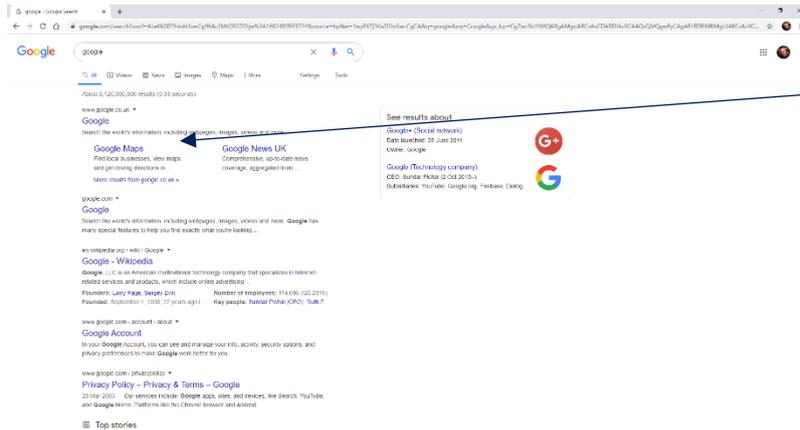


## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

### What it is all about

Almost without exception modern business is dependent on the Internet for communication and sales. It is therefore critical that every effort is made to make sure that search engines, particularly Google, categorise a business correctly and that the page's ranking is as high as possible.



This is where the business wants to be when a potential client makes a search for the product it sells.

There are no magic wands when it comes to SEO (search engine optimisation), but there are certainly techniques and actions a business can take to maximise its chances of success. This is what this WP is all about.

### Quick Learn

- SEO is an ongoing process that requires constant attention and a budget (see the SEO staircase in the Rigour section).
- It must be clear what market sector each webpage is pitching at.
- The theme of the content must describe the market sector for the page (Google decides with whom to rank the page based on its understanding of what is being stated or offered). Sectors should not be confused, but rather new pages made.
- Having identified the market sector, the potential clients must be analysed to determine their preconceptions about the market. It is these preconceptions that can be used to write content that will interest potential clients.
- Website developers should not be permitted to hijack marketing policy: they are probably not experts on your market.
- Research is crucial: the business that pays it lip service only will be making a less palatable form of payment further along in its development.
- The research resources should be balanced according to qualification and ability, e.g. the business in question is the resource with real knowledge about the market and should lead discovery of themes and content, but website developers will be the experts on advertising and their lead will be necessary on this point. Methods for analysing the websites/pages are listed under the Research section.
- Work carried out on website design can be scuppered if a trademark challenge is received. Advice should be taken from patent lawyers (see Further Information) and the balance of risk between a



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

delayed implementation of the company's website and a threatening trademark challenge should be thoroughly assessed. See WP Trademarking – Further Information.

- Branding should be consistent across the entire site, and it finds relevance with regard to slogans that may be used and trademarking.
- Develop relationships with stakeholders (WP Marketing – positioning map) and encourage them to link to the relevant pages of your site. Do the same through social media, but only court high quality and relevant sources. Cranking up the number of relevant back links may be outsourced because the task can become 'donkey work', but if this is done make sure the SEO expert involved know that only relevant and good quality links are wanted.
- Performance measurement must be set up. Google Analytics is ideal for this (web developer will be able to do this).
- It is advisable to establish a policy and budget for website advertising (PPC – pay per click, etc.)

### Key Actions/Advice

- Choose a web developer. There are two companies with whom the author has worked listed under Further Information.
- Do the market research necessary to establish page themes, content, and keywords and phrases.
- Establish the website development vs. trademark challenge risk and decide on a policy.
- Deal with wireframes, pages, themes and content for the site
- Start the back-linking process – cultivate stakeholders and get them to link to the site.
- Set up analytics on the site and make sure there is a process for continual improvement.

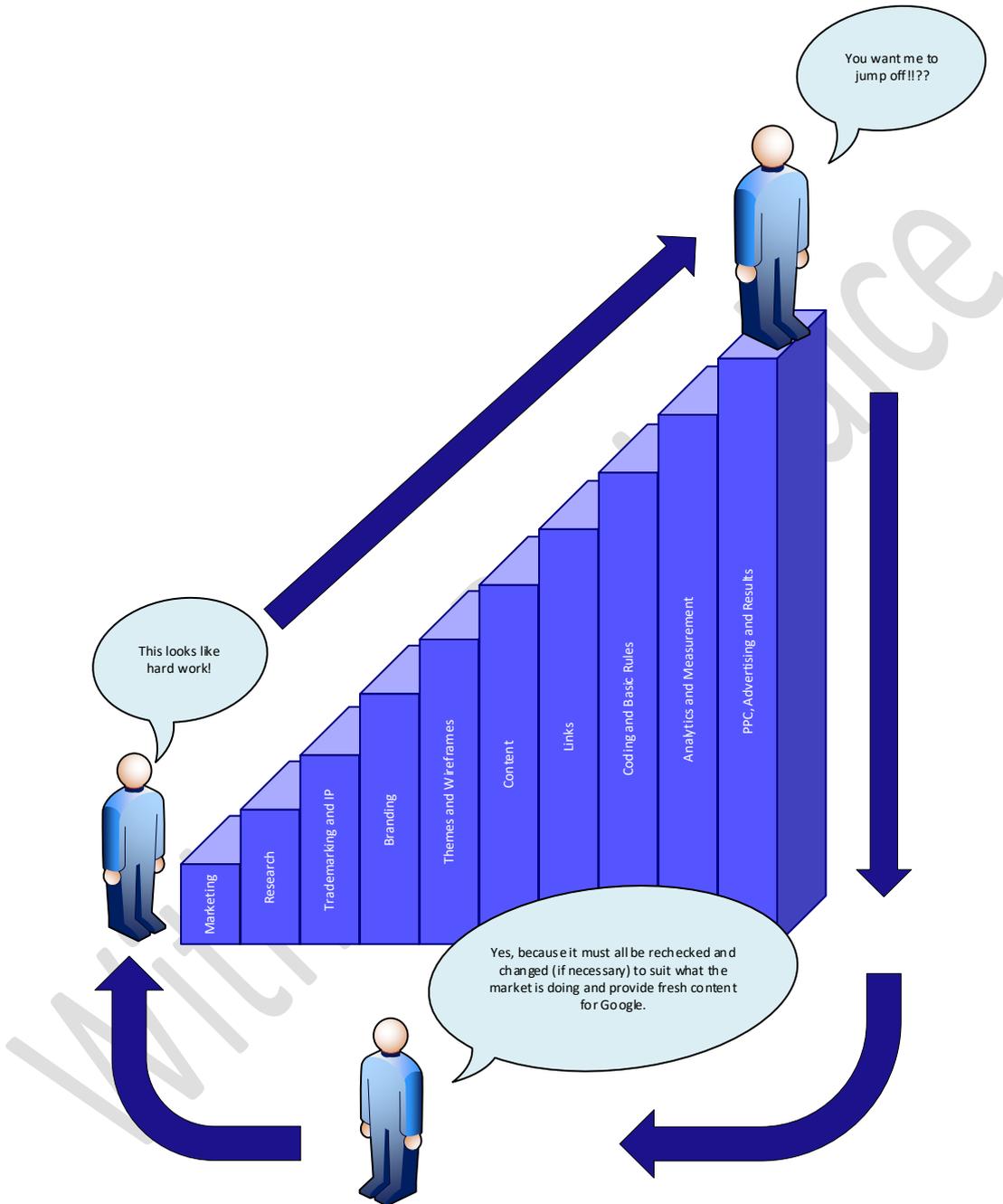


# JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

## Rigour

### SEO Staircase



## Marketing

This WP is not intended to give guidance on marketing (see Marketing WP in Further Investigation), but there are some issues to contend with before attempting to negotiate the SEO staircase above.



## JonJu Tech Ltd.

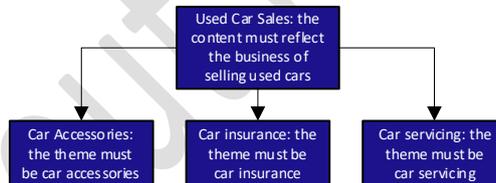
(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

There are several questions that must be thoroughly understood and answered:

- What sector of the proposed market is the site to be pitched at?
- What will the theme of each page be?
- What are the dominant perceptions of the target market and how will these be used to leverage interest?

It is particularly important to understand what sector of the market is being pitched in and how that relates to the product/service on offer. This is a complex topic, no real market being simple, but if *positioning* is not understood properly themes will be confused and the niche that is of most importance to the website may be missed. For example, car sales, used car sales, new car sales, servicing, car accessories and car insurance are all in the same area of the market: but each occupies a different but not mutually exclusive position. Understanding how a business fits into its sector aids understanding of the themes described below and is usually documented as a *positioning map* (see Marketing WP).

As is obvious, Google must decide with whom to rank the page in question. This it does by trying to work out what the page is offering: plumbing; health and beauty; used cars; etc. The content of the page must make this obvious by having a consistent and meaningful theme, which is of course related to the business in question. That said, it is a mistake to try and cram everything into one page. If used car sales is what the site is about then the home page should have this as a theme, but if the company in question also offers the sale of car accessories, the accessories should be on a separate page for which the theme is car accessories – Google will understand the link because the pages will be linked. A common error is to make too much of an important client in theming on a page and thereby make the theme about the client's product, which will confuse Google and may result in the page in question being listed in with the wrong businesses. A facile website structure with themes is shown below to illustrate the above.



The content must also be such that it chimes with whatever preconceptions a desired client has about the market in question. An example that is pertinent to the EM is the design of electronics and its perception of being a smoke and mirrors industry. Potential clients are often mesmerised and unable to understand the process by which an electronic product is delivered, and this is a preconception. Such clients want to see into this world so that orders are not placed blindly. This is a preconception that can be used to lead content.

The foregoing is intended to cover the important topics in Marketing that relate to SEO, but it is recommended that the WP on Marketing is studied if marketing and not SEO is the object of the reader's interest

### Research

Thorough research forms the foundations of both SEO and the website itself. *Research is crucial: the business that pays it lip service only will be making a less palatable form of payment further along in its development.*



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

It is necessary to identify the companies that fit into the positioning map mentioned in the previous section, i.e. the potential clients, related suppliers, competitors, support services, that all interact in some way with the business model and website proposed. These companies then need to be researched to establish keywords, SWOT (strengths, weaknesses, opportunities and threats), and any other factors that may in some way impinge on the website SEO in question. There are no hard and fast rules – just the gathering of as much relevant information as possible so that opportunities and strengths can be exploited and weaknesses and threats mitigated. The websites of these stakeholders are a good place to start because a company that does not have a revealing website is not communicating very well, so websites tend to be revealing for this reason.

This kind of research can be outsourced, but there is a big problem with doing this. No matter what the sales pattern of website development companies, the only source, apart from the clients themselves, that really understands the market is the company developing the website, or its competitors. There are companies, e.g. Experian, that can do deeper research than is outlined below, for fees, but so much is possible without spending a penny that it is recommended to make best use of this first. Budgets for advanced research are probably only worthwhile for products that are expected to yield significant sales.

*Do not allow web development companies or SEO experts to hijack your marketing. Advise, yes, but never allow them to take control because they will have only a fraction of your knowledge. There can be a deal of drudgery in collecting the data, and perhaps that might be meaningfully outsourced, but never let such organisations take control of the marketing.*



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

The following table contains information that can be gathered about the stakeholders' websites for the research.

Observation/check	Tool	Comments
Determine how many pages are linked to site being analysed.	Google – <i>link:domain</i>	Type <i>link:domain</i> into Google's search engine and a list of all the pages linked to the site will be shown, including the number of them. This is useful to establish how well back linking is being effected on the site in question. Back linking improves SEO.
Assess the number of pages in the site (how big it is)	Google – <i>site:domain</i>	Type <i>site:domain</i> into Google's search engine and a list of all the pages that comprise the site will be shown, including the number of them. This is useful to establish the size of a site. It only shows linking pages within the site itself – it is not showing back links that are direct driver of SEO.
Check the visibility of a keyword or phrase	Google – <i>allintitle:word or phrase</i>	Type <i>allintitle:word or words</i> into Google's search engine and all the sites that have that word or phrase in their title will be displayed. This is very powerful. If something is going to swamp a name it becomes obvious. An example might be 'electronics design' for which Newbury Electronics pays heavily, but an <i>allintitle:electronics design</i> shows that many sites rate above them for this phrase, including competitors.
Find the keywords and phrases that cause visitors to land on a stakeholder's site	Google	Do a search that finds a site for which it is desired to know the words and phrases that have caused visitors to land on a given site, e.g. electronics design to find Newbury Innovation Ltd. Go to the site in question and then press the 'back' arrow to return to Google. Phrases and words that have caused visitors to land on the site in question will be shown in a box below the site. This is a powerful tool.



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

Observation/check	Tool	Comments
Keyword Suggestions Profile	<a href="http://www.seotoolset.com/tools/free-tools/">http://www.seotoolset.com/tools/free-tools/</a>	Ideas for keywords can be tested to see how popular they are. The link under 'Tool' allows such tests to be carried out. This is useful whilst finding the best keywords to define themes. CPC (cost per click) and CTR (click through rate) are given too. This tool also gives a list of market sectors that the keyword or phrase has been identified with.
Single Page Analyser	<a href="http://www.seotoolset.com/tools/free-tools/">http://www.seotoolset.com/tools/free-tools/</a>	This tool gives an analysis of words and phrases on the page that it is given as a target. It is particularly useful for analysing the sites of stakeholders relative to one's own site. It also gives an idea of the reading difficulty, although this WP recommends that reading levels are tuned to the desired market, not dumbed down to be palatable to all.
Multiple Page Analysis	<a href="http://www.seotoolset.com/tools/free-tools/">http://www.seotoolset.com/tools/free-tools/</a>	This tool will allow up to six (probably just home) pages to be compared for basic attributes. It is a good way to compare competition and stakeholders.
Cloaking Check	<a href="http://www.seotoolset.com/tools/free-tools/">http://www.seotoolset.com/tools/free-tools/</a>	If the stakeholder's sites and companies are reputable this check is probably not necessary, but if there could be issues it is wise to use it. A kind of malpractice is to show one page to users and configure another page for search engine crawlers. This tool will detect if this is happening.
Scripting quality	Google	Right click on the page in question and select 'view source' from the drop down. This will show the html, and it is also possible to view the javascript and CSS for the page in question. Assessing this for quality will take some knowledge, but it is not too hard (usually) to confirm whether the site meets the requirements for good SEO coding in the Coding and Basic Rules section below.
W3C evaluation of code quality on a page/site.	<a href="https://validator.w3.org/">https://validator.w3.org/</a>	W3C provide free validators for html and other scripting. The quality of a site's scripting can be tested using this tool. Note that the W3C logo may be displayed on the website if the code passes the requirements of the validator.

*Obviously, such significant research will unearth a good deal of information, but the objective is to find the key issues that will focus the company's marketing. Concentrate on this when making a precis of the data.*

### Trademarking and IP

The design of websites to best effect with regards to SEO and ranking necessarily requires branding and logos. The problem is that development of the website may get ahead of applications for ownership of trademarks, and, if unlucky, a company may find that it must unplug much of its web design and SEO work because of a challenge.

Unfortunately, the answer may not simply be to wait for the award of trademark/s before starting website design and SEO profiling because it can take many months before a trademark is approved. Commercial pressures may mean that SEO, branding, and website design are deemed necessary first.



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

The WP Trademarking is recommended for use as guidance on this topic (see Further Investigation)

### Branding

Branding may be important to SEO because of phrases, slogans, labels and/or URLs that are chosen for the business, and these may of course be trademarked, or be in the process of becoming so.

Branding guidelines may be found in the WP Branding document – see Further Investigation.

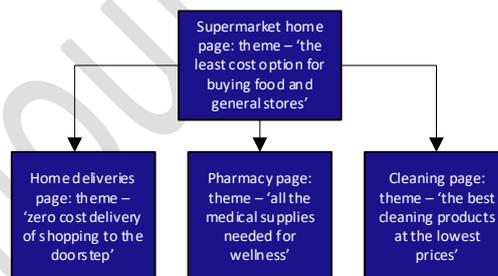
*It is important to make sure that any of the above fit into the keyword/phrase policy of the site, and that they will chime with the themes and content of the pages.*

### Themes and Wireframes

The design of websites is covered in the WP Website Design (see Further Investigation), but themes and wireframes are an integral part of SEO.

The theme may be thought of as the message that a page conveys, and this must align closely with the purpose of the business (more particularly with the purpose of the section of the business that the page in question covers).

It must not be overlooked (and is obvious after a moment's thought) that Google's ranking system can only rank pages against each other if it can work out what the page is offering. If the message is garbled or inconsistent the page can expect to be dumped at the end of the rankings queue. The theme of the content of each page is especially important. This is best illustrated by example.



If all these sectors were crushed onto one page Google would be unsure whether to list the page with competing pharmacies, food suppliers, cleaning products or delivery services. Even if the site had such traction that it listed near the top, it is not customer facing to hit visitors with such a sea of data – bad design. Also note that Google will still know that the site offers all these things because the pages will be linked.

For smaller businesses, this issue is even more critical because confusion will probably cause relegation to essentially invisible ranking positions.

The diagram above is a wireframe. The business owner should map out a wireframe for his business and make sure there is an unambiguous theme for each page.



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

### Content

Content and Theme may well be made up through the same words but the two do not have the same purpose. Theme is all about making sure that the sites pages get classified properly for ranking, whereas Content is about conveying a message that chimes sufficiently well with a visitor's perceptions to make him stay on the page and read, or, better still, follow a link to an order page.

Writing good content is covered in the WP Marketing document and this should be studied and understood before any SEO Content is approved. See Further Investigation for a link to WP Marketing.

### Links

By links is not meant forward links that are on the website, but rather links from other peoples' sites that link to one or more pages of the site in question. Such links are known as 'back-links' and are critical to SEO because Google uses the number and quality of them to rank pages.

The number of back-links a site has can be determined using the Google search engine commands below.

First determine the total number of links to the page from 'link:domain'. Then subtract the result of a similar search using 'site:domain' (all the links that are self-generated in the site itself). It will also be possible to see where the links are coming from.

Link quality is critical. There is no point in racking up large numbers of links from irrelevant sites – Google will notice and de-rate the page accordingly. In fact, even when a potential link is available and relevant, it is wise to assess its quality (both site quality and the quality of the relevance). High fidelity and relevant links are what Google prizes.

It is worth getting listed in web directories, although do not expect this to give birth to a meteoric rise in ranking.

It is well worthwhile referring to the Market Positioning Map found in WP Marketing (see Further Investigation). The research will have identified all the stakeholders in the market in question, and their relevance will be paramount. It is well worth seeking back-links from such companies, with whom the developer may already have built appropriate relationships. An example of this that applies markedly to the EM is Product Designers – very relevant.

A weather eye should always be kept open for what are known as 'link-magnets'. This WP could, with a good wind and a bit of optimism, become a link magnet. It offers crucial advice for free and if that advice is meaningful it could well attract attention and cause other sites to make links to it (back-links chalked up).

Social media can assist with back-linking because it vigorously encourages its readers to link and view the content in question. A policy of writing regular posts for Linked-In is a good idea.

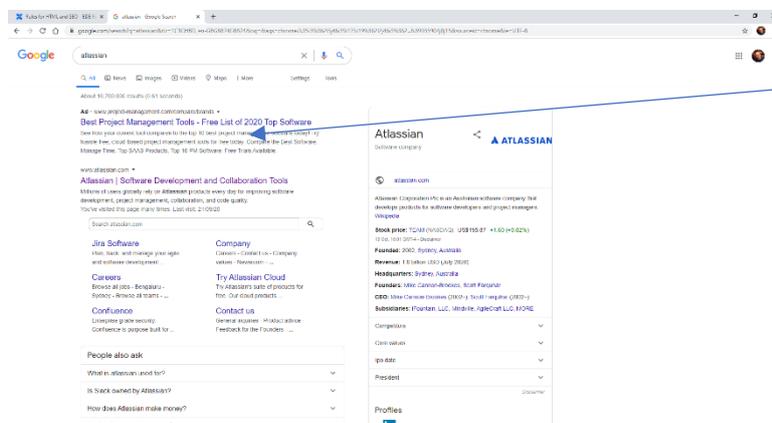
Finally, it is possible to get professional help to do the work that is involved in building back-links. A good provider of this sort of service is well worth considering if budgets allow (see Further Investigation – Ditto Digital)



### Coding and Basic Rules

General rules for coding of each page follow:

- It is important to use keywords in the title tag, but the content must follow on from this. Content, title and headings that do not chime will cause issues. Six or so words is adequate for a title.
- Put the meta description after the title tag. Write a short sentence that it is felt will best hook a reader on that page for the description. It is the message that usually appears immediately beneath the title on a search – see the diagram below. 12 to 24 words.



Meta description

- Heading tags should make use of keywords and phrases
- Javascript tags can be used in html but care should be exercised. If the Javascript causes pages to change then the crawler may miss such content. A way of avoiding this is to put all javascript in separate files.
- Make sure that all images have alt tags populated for them with a short meaningful description of what the image in question portrays.

### Analytics and Measurement

It is, of course, necessary to measure the effectiveness of an SEO policy and implementation on a given website. Imagine the frustration if having followed all the rules, the website remains buried in the weeds of secondary page ranking and the owner can not work out the reason/s.

It is not the intention of this WP to give guidance in setting up web analytics, your developer can do it: but the developer must do it. Make it a requirement in the specification for the website. Google Analytics is probably the most popular.

There are a multitude of things that can be measured, but the basics are covered by the important rules below:

- SEO promotes hits and leads to high ranking, i.e. visibility. Google Analytics will show hits/page over time.



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

- Content promotes sales. If the content is good and chimes with the visitors needs such will encourage the visitor to remain on the site and probe, which promotes sales. Google Analytics will show what is known as bounce rate. If the visitor hits and leaves a page almost immediately it is known as high bounce rate, and clearly suggests poor content, and therefore sales, and vice versa for good sales.
- Performance promotes a high return on investment (ROI).

The above is quite basic, and GA is capable of very much more, but it is necessary to focused on need. It is easy to over-analyse and miss important conclusions in the noise.

Obviously, disappointing performance on any of the 3 points above must result in remedial action that modifies/updates the website and its pages.

### PPC, Advertising and Results

PPC and advertising is perfectly possible, and probably advisable on most commercial sites. It is valid for a company to set all this up themselves, but it really is easier and less painful if it is left in the hands of a professionals, who will be able to advise on the results. The important thing is to design a policy and set a budget, which will of course correlate with performance.

And Again, i.e. make the jump on SEO Staircase – see diagram above

This process never ends: markets change; new products are introduced; current affairs and governments move goal posts; etc. It is necessary to keep cycling through all the sections above to stay on top of SEO, although not all sections will need changing on every pass.

### Further Investigation

Professional assistance with back-linking and SEO: <https://dittodigital.co.uk/>

Patent lawyers useful for assessing trademark issues: [www.dehns.com](http://www.dehns.com)

Website developer: [www.headred.net](http://www.headred.net)

Website developer: [www.alberon.co.uk](http://www.alberon.co.uk)

A good reference for SEO: Bruce Clay. *Search Engine Optimisation for Dummies*, 3rd ed.: Wiley

An excellent reference for marketing: Laurie Young and Bev Burgess. *Marketing Technology as a Service: Proven techniques that create value*: Wiley



## JonJu Tech Ltd.

(Read the JonJu's 'Disclaimer' (end of document) before using/reading this document)

### Disclaimer

The information in this WP is provided on an 'as is' basis and no responsibility whatsoever is accepted by the JJ for the accuracy and/or validity of the information herein.

Any reliance placed on the content of this WP is entirely at the reader's risk.

No promise or warranty in respect of any use of the content of this WP, including mistakes or omissions, is offered to its reader by JJ. No legal responsibility is accepted by JJ for any loss, consequential or otherwise, damage, monetary burden, or reputational decline, that might be suffered using the WP's contents.

### Definitions

BLE: Bluetooth Low Energy

ESD: electrostatic discharge

FMEA: failure mode and effect analysis

JJ: JonJu Tech Ltd

PCB: printed circuit board without components assembled on it

PCBA: printed circuit board with components assembled on it

Production Release (PR): date at which production is launched without any involvement or supervision from a design authority.

ROI – return on investment

SEO – search engine optimisation

SLEEP: a low current condition that a device can be put into to reduce its requirement for current, and hence longevity if powered by a battery.

WP: white paper

Singular masculine and feminine pronouns, no matter the gender used in the text, are deemed to cover all sexes.