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Evaluating your On-line success with Web Analytics

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1   WHY THIS METHODOLOGY ?

Today, no-one can dispute that On-line business has become an everyday reality. While soing business on-line is just like doing it off-line, measuring the success of online presence has become both a necessity and a major challenge for small and large companies alike.

As many of you, I started my journey into Web Analytics driven by the need of report. Surprisingly, web activity reports were not something easily available back in 2001 and I faced very quickly my first challenge: find a tool.

Next logical step was to make sense of the data provided by the tools. This task proved to be a far harder exercise than deploying the tool itself.

So I started searching for the magic receipe, the golden methodology out there. After reading most of the books available on the Web Analytics subject, it became clear to me that the methodology I was looking for was not documented yet.

So I decided to create mine, test it and write it down. This methodology is what I'll share with you during the following pages.

I developed it over the course of 5 years, using it, testing it and improving it on a permanent basis. I don't have the vanity to profess that it is the only one you can use but it is the one that works for my company and my colleagues.

From now on, I'll use the term "site" to describe the services a company offers on-line. It is obvious that in most cases, the offering will consist of more than one single web site but for the sake of simplicity I'll use the generic term "site".

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2   FULLFILLING THE FUNDAMENTAL GOALS

Internet and Mobile Medias are less than 20 years old channels but the overall logic of doing business through them remains the same as it has been in the past with "traditional" channels.

It is my belief that any site's receipe for success can be summarized in 4 essential goals.

If the site fulfills adequaly these 4 goals, it can be considered successful. If it fails any one of them, it will require taking some corrective actions.

2.1   Reach & Acquire

Let's step out the online world for a moment and turn the clock 2000 years back. Marcus, the Roman baker was facing a problem: As great as his bread was, unless he had customers to buy it, it was largely irrelevant.

Running a bakery back then was not unlike running it today: you needed storage, owen(s) and ingredients. This meant that his infrastructure was static and it was impossible for Marcus to bake on the go. So, to sell the bread, he had to bring the potential customers to his shop.

Marcus options to achieve this were finite: advertise around the city, make a nice looking bakery and hope that the word of mouth would work.

But what Marcus was equally interested in was to reach as many potential customers as possible. In this context, reach meant that he wanted them to come at least once to his bakery so that they knew it existed. Even if they did not buy the bread during their first visit, he was hoping that he could reacquire them at a later time and sell them bread.

All of these challenges still exists today as, like Marcus, we mostly build "static" on-line resources and we try to attract audience to visit them. Attracting the audience by first reaching them and then acquiring them is therefore the first essential goal any site or service must achieve.

It is important in my opinion to make a distinction between Reach and Acquisition. Reach is essentially a "one of" event. Once reached, you know about the site or the service. Acquisition takes place everytime you visit the site or service. This is the reason why Reach is a visitor based concept while Acquisition is a visit based concept.

In short…

- Reach is defined by the proportion of the potential target audience that visited the service

    - Reach is a visitor based concept

    - Any visit to a site constitutes an Acquisition

    - Acquisition is a visit based concept

    - Acquisition can happen without spending any money – Organic acquisition

    - Acquisition can happen as a result of an investment– Paid acquisition

    - Efficiency of the acquisition is mostly dependent on the subsequent behavior of the visitor and is therefore related to the 3 other essential goals (see later)

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2.2 Engage & Disengage

Having reached and attracted his potential customers, Marcus was facing another challenge: how to get them convinced that his bread was superior to the one from his competitors?

Marcus wasn't the only baker in town and his good looking shop wasn't enough the tip the scale in his favor. Marcus had to rely on persuasion techniques. He would give the people samples to taste, explain why is bread was better, mentioning his existing happy customers, highlighting his quality control of the process and would describe to them the variety of breads he was baking, hoping to convince them to buy something to prove his point.

Not much has changed in 2000 years and your site still has to convince the people you just acquired.

This convincing is usually achieved via interactions between the visitor and the site. The more interactions, the greater the chances are that the visitor really understands what the site is about.

Some typical on-line engagements

- Consume content

- Perform an internal search

- Register

- Download a piece of content

Engagement is therefore defined by these interactions.

Engagement should always be looked from 2 angles: the amount of engaged visits (that is what proportions of the visits qualify as engaged) and the quality of engagement (that is how engaged the visits are). Quality of engagement is should reflect your own priorities: if registration is an important step toward purchase on your site, then visits with registration are surely more engaged than visits with an internal search. But the important thing is that YOU define these levels of engagement.

Identifying your audience

Quite often, there is an assumption that every visit on the site is an opportunity to seize. This leads to try engaging each and every of the visits.

This turns out to be a dangerous assumption in several cases. Let's return to Rome for a moment and see how it affected Marcus business.

Several of the people entering his bakery for the first time were not looking for bread but for cakes. Marcus wasn't selling cakes and found himself spending a great deal of time and energy explaining it to these people. It became clear to Marcus that he had to disengage early on a portion of his visitors in order to concentrate on the potential bread customers.

Just like Marcus, if your UK online store can't ship to the US customers, there is little point in trying to engage the visits from these ISPs.

In other words, you'll also have to convince the non target audience that this is not what they are looking for.
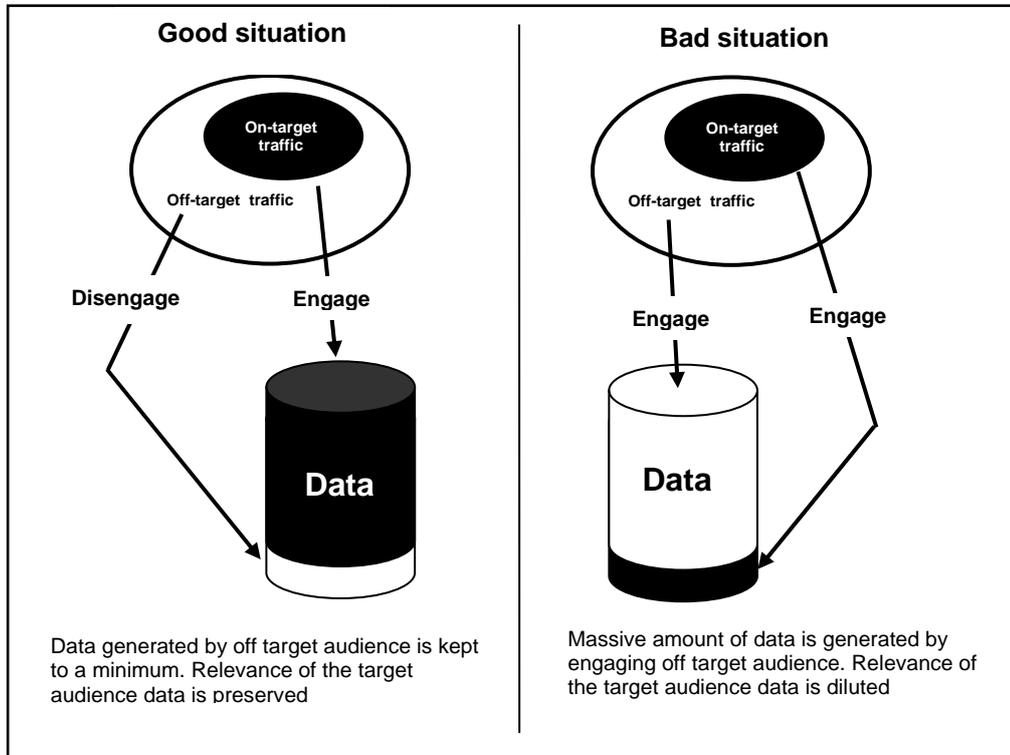
This aspect may appear secondary (and it is probably the reason it is so often forgotten) but it is in fact very important for 3 main reasons:

- Non target traffic uses your bandwidth and dilutes the accuracy of the target audience data

- Non target traffic on site A might be target traffic on site B and redirecting them to site B has potentially more value than trying to engage then at all cost on site B

- Non target traffic is, for a reason, very hard and costly to engage

In these respects, evaluating how well you fend off the unwanted traffic is as important as measuring how well you convince the target one.

Ideally, you want that the non target audience would get the message with minimum interaction on your site.

For instance, say that your site attract 98% non target audience. If your site requires them to browse most of your content before the convincing is done, analyzing the data from the 2% will prove cumbersome.

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Good situation	Bad situation
On-target traffic / Off-target traffic — Disengage / Engage — Data	On-target traffic / Off-target traffic — Engage / Engage — Data
Data generated by off target audience is kept to a minimum. Relevance of the target audience data is preserved	Massive amount of data is generated by engaging off target audience. Relevance of the target audience data is diluted

In short…

- Engagement is a visit based concept - a given user may make several visits, some engaged, some not Engagement reflects the level of interaction the user has with the site

- Engagement is created through events that the user does with the site (ex make a search, register, subscribe…)

- An Engaged visit is defined as a visit where at least one engagement event took place

- The level of engagement within a visit is defined by the weight of the engagement events as defined by the site (ie a registration might be considered as having twice the weight of an internal search)

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2.3   Convert

For Marcus, this was the most important thing: make these people buy his bread. As soon as the customer would take bread and pay for it, Marcus considered this person a customer. In marketing terms we would say a converted user.

While we all can relate to this monetary transaction as a conversion even in today's economy, it is important to stress that conversions can take other and diverse forms. In fact, conversion includes in fact everything you eventually want the users to do on the site.

For example, an e-commerce site will naturally define conversions around the purchases of good but services but a support site may define conversion as the successful download of a self helping document or driver since it will hopefully prevent the user to contact the call center and generate a cost for the company.

In short…

- Conversion can be defined as the core action(s) & transaction(s) the site expects the user to perform

- Conversion is diverse in nature (purchase, download, registration) and always site specific

- Conversion can be a visit or visitor based concept

- Monetary conversions value: Transaction that creates an income. In this context the conversion gross value can be considered to be equal to the amount purchased

- Non monetary conversions value : typically defined as the money or as a value given through user retention/satisfaction

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2.4   Retain

Now that Marcus got customers, it was important to keep them buying their bread from him. This was optimum for Marcus as all the hard work had already been done and these repeat purchases were the most profitable one.

Common sense dictates that retention of existing converted users is the key to success but limiting retention to repeat conversion would be a mistake.

Here's why: for some time Marcus noticed that several of his loyal customers were not buying bread from him anymore but kept coming back. Interested to understand why, Marcus heard that several of them felt his bread range was lacking variety and that they often bought other types of breads from another bakery.

Marcus decided to adapt his offering and these customers started buying (converting) again

As we can see, Marcus managed to correct the situation because while his engaged customers did not convert anymore, they stayed engaged, and this gave him a chance to reconvert them.

Therefore I define retention as the ability to reconvert users and/or at least maintain the users engaged visit after visit.

In short…

- Retention is defined as the capacity of the site to make engaged and converted visitors to reconvert or at least make repeat engaged visits

- Retention is a essentially a visitor based concept - each of the visit is Acquired, Engaged or Converted and their succession pattern defines the retention

- Repeat visits (by the same visitor) per se do not define retention alone

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2.5　User experience

The User experience is a matter often discussed by when it comes to the on-line resources and is sort of one of the most elusive thing to evaluate via Web Analytics alone.

First, it is important to understand that the User experience is a result of the 4 goals we've just discussed and not a goal in itself. Noone design sites for the sake of User experience, Rather, User experience is a vector for better acquisition, better engagement, better conversion and better retention.

Say for instance that you are promoting your e-store with a banner on another site. If the banner advertises a special deal but the link itself points to your home page where the deal is nowhere to be seen, you managed an acquisition but the resulting user experience will be disastrous and may even prevent the user to start engaging.

I've just stated that measuring the User experience with Web Analytics is next impossible but it does not mean that you should give up.

If you want to know how good or bad the experience was, ask the users !

My recommendation is to use an exit survey surveyed to about 5% of the sessions asking few questions:

- Why did the user come to the site?

- Did he/she achieve what he/she come for?

- How was the experience

- Will he/she come back in the future?

-

As you can see, the third question is the one directly relevant to the User experience but the first and second one are equally important.

Measuring the user experience from the survey

1. Single out the surveys that rated the User Experience as bad
2. Out of these, remove the surveys where the answer to question 1 showed the user to be off target
3. Results on question 3 should give you a good feel of what your user experience is.
4. Creating the insights on User Experience
5. Associate the surveys to the sessions where the survey tool place
6. Export these sessions to a data mining tool
7. Using data mining, identify (if possible) patterns that seems to lead to these bad results
8. Reproduce on the site the patterns and solve the problem!

This approach, while beyond the scope of traditional Web Analytics, can be a powerfull addition to the more traditional user panel.

In short…

- Don't try to guess how the User Experience was, survey the users !

- Discover the problem patterns with the proper tool by mining the relevant sessions

- Improve and verify (repeating the 2 steps above)

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3   THE FUNDAMENTAL GOALS & MEASURE OF SUCCESS

Now that I have developed what are the goals any site or service has to achieve, it is time to consider how to measure success. As said earlier, measuring the overall success means building the capacity to evaluate the performance of these 4 essential goals, while understanding what it means from the user experience point of view.

Before being able to evaluate the success of the essential goals, you'll need first to establish your site's baseline Key Performance Indicator set.

3.1   The concept of KPIs

The concept of KPI, whisle often mentioned in the Web Anaytics literature, still has no real commonly agreed definition, so allow me to develop a bit on my idea of the KPI concept before moving on how to create them.

Here's the example I often use to describe the KPI concept to my business contacts.

Consider a car journey. It always includes the following parameters:

- You have a goal to reach: a destination

- You have a starting point and a starting time

- You normaly have more than one way to reach a destination

- You have resources that you manage (gas, time)

- You have incentives (e.g. arrive in time, do not get a speeding ticket, drive safely, be fuel efficient)

So, what do you usually do to arrive in time at destination?

You evaluate the allowed speed on the road and the distance to destination, you calculate when to start the journey

While driving, you keep an eye on the speedometer to make sure your speed is within authorized limits (not too fast, not too slow)

You also monitor the fuel gauge to know if/when a stop at the gas station is wise

In other words, your success depends on strategical decisions (correctly planning the departure time, choosing the right roads) and good execution.

And how do you achieve good execution? Mostly by monitoring 2 Key Performance Indicators (Speed & Gas)

As you see, a good KPI is nothing more than an indicator that helps you to understand how your plan is executing and which should give you indications where and how to react if things go off track (for example, if you are on a highway limited to 120 km/h (60 mph) and your speedometer KPI shows that you are going 140 km/h (70 mph), you react by releasing a bit the gas pedal and the KPI comes nicely down to 120 km/h (60 mph)- confirming that the action had the desired effect).

Getting to the KPIs

Creating the right set of baseline KPIs has always been the one of the main problem for Web Analysts. Should you use "Industry standard" KPIs or create your own? In my experience, the optimum solution always ends up being a mix of both.

What is important however, is to follow a structured process that will tell you which Industry standard KPis are relevant to your site and give you the right material to create the those missing.

First, you'll need to understand properly the various goals and targets the site is trying to achieve and gathering and documenting these business goals is the foundation of your measurement process.

Unless the site is a 1-2 persons operation, there'll probably be a substantiate amount of people involved in its strategy and orientation. You'll have to find the people who will tell you what are these goals and orientations.

I call these people Actors (they are usually referred as Stakeholders but I prefer the term actors since it comes from the verb "to act" which is precisely why we engage in the analytical exercise).

3.1.1   The actors

What is my definition of an actor in this context?

An actor is a physical person whose job responsibilities have an influence on the website.

Because this definition usually includes large number of individuals, let me introduce my first categorization. Actors can be divided into 2 categories:

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- Decisional actors, who have a possibility to drive changes on the site

- Non-decisional actors, who do not have a possibility to drive changes on the site

In this respect, a person uploading content on the site is a non-decisional actor while the person creating that content is a decisional actor.

The second categorization concerns the decisional actors. Decisional actors can also be divided into 2 sub-categories:

Direct actor

The direct actor is usually the most evident one. He/she makes choices which affect directly the website (design, content, advertising…).

Depending on the company size and mode of operation, direct actors are internals, externals (design agency, advertising agency…) or, quite often, both.

For direct actors, the company's web site is usually their only available channel.

Indirect actor

The indirect actors are often among the most important ones. He/she makes decisions that affect indirectly the web site (budget split, overall strategy)

For an indirect actor, the company's website is just one of many available channels.

Logically, the first part of the methodology will concentrate on how to identify these 2 sub-categories of decisional actors. Non decisional actors will be left out of this process since they tasks should not directly influence the web site's performance.

3.1.2   Identifying the Actors

The usual temptation would of course be to rely on the company's reporting structure and derive the actor list from this but I think this approach has several shortcomings: websites have become incredibly complex channel for businesses with complex internal cross relations. This complexity is rarely visible in organigrams.

This is why I recommend the following method: Use the organigrams to identify a middle nucleus (people not too high, not too low) and organize interviews. If you can get them to sit together, it's better. Otherwise run face to face interviews.

During the interviews, make sure to collect precisely everyone's responsabilities in respect to the web site. If they have delegated some of these responsabilities, get the names and interview them later. Collect the names of people they are reporting to and/or getting the budgets from.

Present the concept of Web Analytics during these interviews and evangelize to convince them of the benefits and make them wanting to be part of the process.
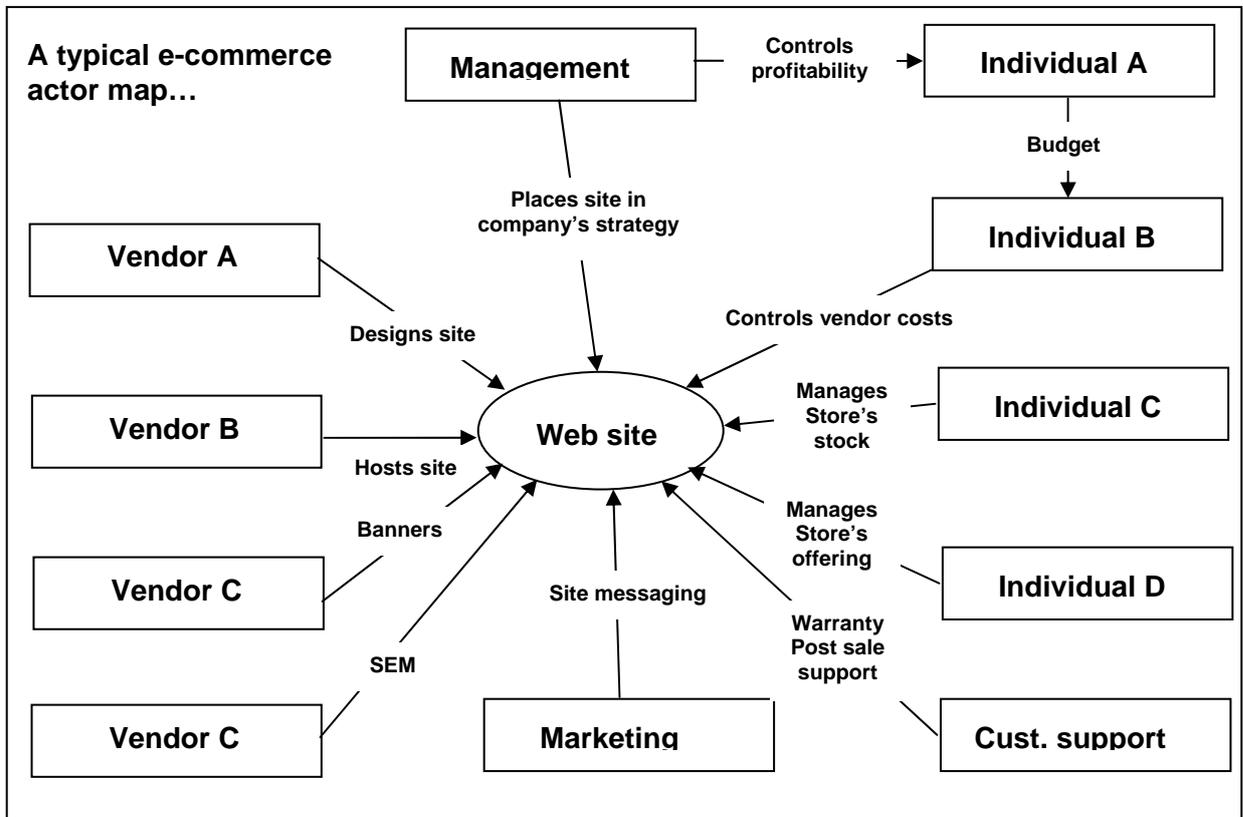
I found it very effective to collect the actor list by creating a graphical map : place the website(s) at the center of the drawing and add the actors around it with arrows (see below) and a one-sentence role description. In addition, keep a formal text based list of the actors with a description of their role. This approach works extremely well with multilevel actors and indirect actors (James, who approves the online marketing budget, Roger, who defines the company's customer support strategy…).

Ideally, at the end of this phase, you'll have mapped the entire site ownership to the various direct actors. Do not forget the externals, meet and map them as well (unless their impact on the site is very limited).

The result of this first part of the process will amaze you (and the actors): you'll have the living picture of the website ownership…

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A typical e-commerce actor map…

Management — Controls profitability → Individual A

Individual A → Budget → Individual B

Management — Places site in company's strategy → Web site

Vendor A — Designs site → Web site

Individual B — Controls vendor costs → Web site

Individual C — Manages Store's stock → Web site

Vendor B — Hosts site → Web site

Vendor C — Banners → Web site

Vendor C — SEM → Web site

Marketing — Site messaging → Web site

Individual D — Manages Store's offering → Web site

Cust. support — Warranty Post sale support → Web site

3.1.3   Getting the goals from the Actors

As said earlier, only the actors know what the site goals are and that is precisely what you need them to tell to you.

I find that the most effective way is to gather all the direct actors in a 4-5 hours workshop (in case the amount of actors is really large, you can also extend the worshop to a couple of sessions or run internal/external workshops).

The key to success is to get ALL the actors present. It is essential here that you have sufficient management backing, i.e. that they are convinced: Usually most actors will gladly join the workshop but in case attendance becomes problematic, you will need the management to carry the message.

Before the workshop: get yourself familiar with the web site that will be worked on. Try to run a draft of the workshop alone and create your own list of Macro Objectives (see below).

A practical but important thing to remember: you are in charge of this process. It means you run and lead the workshop(s) and you are responsible for writing down all the information gathered during the session(s). You also need to keep the workshop on track.

Collecting the site's major goals:

Small audience (2 to 10 actors)

Ask from each actor in turn what major goals the site is expected to achieve. Goals are faithfully documented.

Large audience (over10 actors)

Ask each actor to write on a little Post-it paper what major goals the site is expected to achieve (One goal per Post-it). We then collect the papers and, together with the actors, group similar goals on a wall board. Then document the consolidated goals list.

At this first stage of the workshop, you have what I call the Major goals. Make sure you have them all and do not hesitate to suggest some new if you feel that they are missing.

Tip 1: Major goals should provide answers to the question "What is the site designed to do?"

Tip 2: Look at the number of goals you have at the end of the exercise – I have rarely seen a site with more than 9-10 true major goals. Anything above this should be looked again to see if some of these Major goals are not Micro goals in disguise (look below for the concept of Micro goals).

Example: Typical Major goal list (e-commerce site)

1.   Attract maximum number of visitor to the site

2.   Convince them through content that our site is the best place to shop for products xyz

3.   Create maximum revenue through on-line sales

4.   Minimize support costs by providing post sale support on-line

The next step of the workshop is to drill down into details. As such, the Major goals are usually too broad to be converted into KPIs. You'll need to break them into smaller goals (the Micro goals).

Collecting the Micro goals:

Small Audience (2 to 10 actors)

For each of the macro goals, ask from each actor in turn to list the limited goals (Micro goals) it takes to fulfill the major goal.

Document the Micro goals

Large Audience (over10 actors)

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Taking one Macro goal at the time, ask each actor to list the limited goals (Micro goals) it takes to fulfill the major goal on a little Post-it paper (one Micro goal per Post-it). Collect the papers and, together with the actors, group similar means on a wall board under each macro goal.

Document the consolidated goals list.

At this second stage of the workshop, you now have the Micro goals drilled down. You're now just one step away from having all you need to define the KPIs.

Tip 3 : Micro goals should provide answers to the question "What is the site expecting the users to do ?"

Example : Typical Major/Micro goal list (e-commerce site)

1. Attract maximum number of visitor to the site

    1.2. Get maximum Organic search traffic

    1.3. Get traffic from SEM

    1.4. Get traffic from banners

    1.5. Get existing customer to recruit their friends/family

2. Convince them through content that our site is the best place to shop for products xyz

    2.1. Get users to read our terms and condition

    2.2. Get users to read our "find cheaper and we pay the difference" policy

    2.3. Get user to scan product pages

3. Create maximum revenue through on-line sales

    3.1. Get users to purchase the products

    3.2. Up-sell

    3.3. Cross-sell

4. Minimize support costs by providing post sale support on-line

    4.1 Get users to track their order status with the on-line assistant

    4.2 Reduce the amount of calls to the call center

It is now turn to enter the third and final phase of the workshop which consists in documenting what I call the Realizations. A realization is what it takes from the user to fulfill the micro goal.

Using same techniques as described above get the actors to list these realizations.

A proper Realization should embedd its own success definition.

Tip 4: Realizations should provide answers to the question "What does it take to complete the goal?"

Example: Typical Major/Micro goal/Realizations list (e-commerce site)

1. Attract maximum number of visitor to the site

    1.2. Get maximum Organic search traffic
    - User searches for a term related to our portfolio and our shop is within top 5 results
    - User clicks the result and visits the site

    1.3. Get traffic from SEM
    - User searches for a term related to our portfolio and the search engine provide a sponsored link to our site
    - User clicks the sponsored link and visits the site

    1.4. Get traffic from banners

- User navigates within site xzy and visits a page incorporating our banner
- User clicks the banner and visits the site

   1.5.   Get existing customer to recruit their friends/family

- User utilizes successfully the "Invite a friend" functionality
- The invitee visits the site after receiving the e-mail

2.   Convince them through content that our site is the best place to shop for products xyz

   2.1.   Get users to read our terms and condition

- User clicks the "Terms and condition" footer link
- User stay on "Terms and condition" section at least 60s

   2.2.   Get users to read our "find cheaper and we pay the difference" policy

- User clicks the "Can't find cheaper" footer link
- User stay on "Can't find cheaper" section at least 60s

   2.3.   Get user to scan product pages

- User navigates through the different product pages on the site
- Each page visit lasts at least 60s

3.   Create maximum revenue through on-line sales

   3.1.   Get users to purchase the products

- User registers
- User validates his address
- User Checks out the cart
- User pays for the cart
- The transacation is validated by the bank

   3.2.   Up-sell

- User checks out a cart with higher value than the initial item placed in cart
- User purchases the cart

   3.3.   Cross-sell

- User checks out a cart where no item has been removed
- User purchases the cart

4.   Minimize support costs by providing post sale support on-line

   4.1   Get users to track their order status with the on-line assistant

- User clicks the link within the confirmation e-mail
- User presses the "update status" button
- User does not create a call regarding order status

   4.2   Reduce the amount of calls to the call center

- User clicks the "Support" footer link
- User visits the FAQ section
- User fill the support form and sends it

As you can see from the example, a Realization is basically a very precise and limited set of interactions the site visitor can do (read a page, log-in, register, write in a discussion board…) to fullfill the Micro goal.

Make sure you have them all and do not hesitate to suggest some new if you feel that they are missing.

At this point, we have enough material for the KPIs but we still need to associate the goals with the actors. It is important to remember that no matter how good the measurements will, their value is only through what the actors decide to do.

Then moving to the last stage of the Workshop, we return to each of the Micro objectives of the site and ask which actor(s) is/are directly responsible for the goal success and how often do they theoretically monitor the success.

Names & frequency are recorded into the document and then it is time to wrap up the workshop.

3.1.4   Points of acquisition, engagement, conversion and retention

I stated earlier that every site is (should be) designed to fulfill 4 essential goals (acquire, engage, convert and retain).

The Goal work I have just described may seem disconnected from these essential goals but in fact it is not.

At this point of the process, we will need to document how the site defines acquisition, engagement, conversion and retention.

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I must stress that these definitions are always site specific and that what constitute an engagement on site A may constitute conversion on site B. Therefore this work must always be done at site level.

The best way to achieve this definition work is to categorize the goals you just documented earlier. Take the list of the micro goals and assign one of the 4 essential goals to it.

Assignement example (e-commerce site)

1. Attract maximum number of visitor to the site

    1.1   Get maximum Organic search traffic -> **Acquisition**

    1.2   Get traffic from SEM -> **Acquisition**

    1.3   Get traffic from banners -> **Acquisition & Retention**

    1.4   Get existing customer to recruit their friends/family-> **Acquisition**

2. Convince them through content that our site is the best place to shop for products xyz

    2.1   Get users to read our terms and condition-> **Engagement**

    2.2   Get users to read our "find cheaper and we pay the difference" policy-> **Engagement**

    2.3   Get user to scan product pages-> **Engagement**

3. Create maximum revenue through on-line sales

    3.1   Get users to purchase the products-> **Conversion**

    3.2   Up-sell-> **Conversion**

    3.3   Cross-sell-> **Conversion**

4. Minimize support costs by providing post sale support on-line

    4.1   Get users to track their order status with the on-line assistant-> **Retention**

    4.2   Reduce the amount of calls to the call center-> **Retention**

3.1.5   Assessing the proper coverage of the goals

One of the biggest risks before creating the KPIs is to miss coverage of some key areas. The solution I use to assess the result is to create the goal map.

The goal map is done by taking each of the micro goal you created and assigning its number on a graph as below:
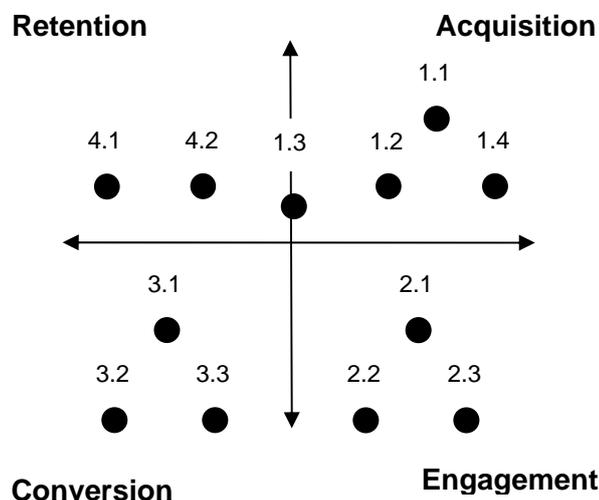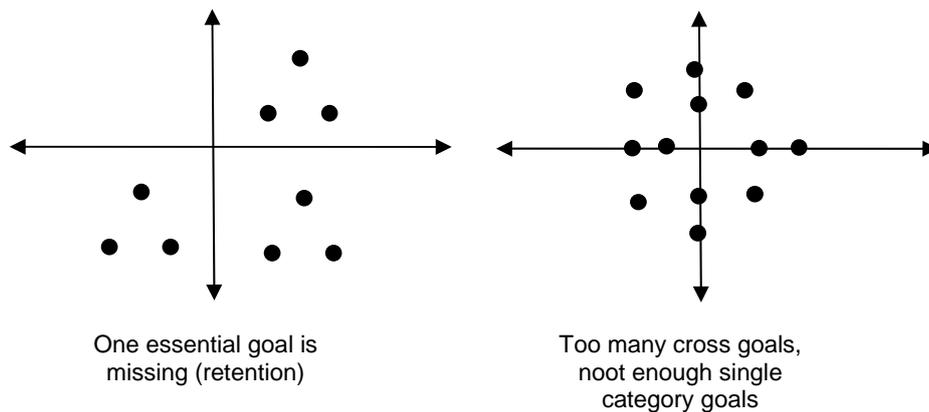
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When ever you encounter a goal that covers more one area (like goal 1. in our example), place it so that it crosses the corresponding axis.

Identifying improper coverage

The maps below show some classical improper coverage that will require corrective work or, in worst case, a new workshop.

One essential goal is
missing (retention)

Too many cross goals,
noot enough single
category goals

Once this work has been done, compile the list into the Points of acquisition, points of engagement, point of conversion and point of retention.

In our example:

Points of acquisition	Points of engagement
SEO	Terms and condition
SEM	Price policy
Banners	Search for product
Mail a friend	Product pages
Points of conversion	**Points of Retention**
Purchase	Post sale support
	Buy compatible accessories (separate sale)
	Buy maintenance package (separate sale)
	Repeat engaged visits to the site
	Recommend the site to a friend

This classification will need of course rubber stamping from the actors. Once you have the worked out the classification, submit it to the actors and make the changes as needed.

3.1.6   Turning the Goals & Realizations into KPIs

Creating the KPIs

At this part of the process, a lot has been already achieved: you have the list of Micro objectives with their corresponding actors and the desired reporting frequency. You also have the Realizations available to meet these goals.

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It is now time to associate one or several KPIs to each of the micro goal. In many cases, you'll find that several "Industry standard" KPI can be used with little or no modification. You'll also usually find out that you need site-specific KPIs.

How to create these new KPIs? There is no magical receipe and it is the stage where Web Analyst experience is the most valuable.

Remember however that the KPIs are nothing else but a way to tell how successfull these actions sets are. Usually, I create the KPIs by converting the Realizations into calculations. This approach has several advantages:

Actors relates extremely well to these KPIs

Their contribution to the Major goal is clearly defined and easily measured

You can weight them and create composite KPIs (more on these later)

Be creative, evaluate the possible interactions associated to the goals and derive measurement. Most important: for each tentative KPI, list action points. If you can't find actions that can change the KPIs score, then chances are that it is NOT a KPI.

3.1.7   Creating the composite KPIs

The KPIs we have created so far with the process are what I call "operational KPIs". While these KPIs are very important for the actor to run the site, they are usually too granular to tell how the site is doing overall.

This is where you will need the composite KPIs. These composite KPIs differs from the previous one in that they are not matching micro goals but matching the essential goals. They are the KPIs that measure how efficiently the site Acquire, Engage, Convert and Retain. These KPIs are also the ones that top management wants to see.

Typical Acquisition KPis

- Reach index : This is essentially to measure what proportion of the target audience has been reached (ie has visited the service at least once)

- Overall cost of acquisition : how much does it cost to get a visit

- Average cost of new acquisition : how much does it cost to get the first visit

- Average cost of repeat acquisition : how much does it cost to get a repeat visit

- Average cost of reach : how much does it cost to get a visitor

Typical Engagement KPis

- Engagement index(es): how well the acquired and repeat traffic is interacting with the site

- Engagement average cost: how much is been spent (if any) to engage the visits to the site

- Engagement average value: monerary value of the engagement (ie how much you consider a engaged visit worth)

- Engagement average profit: Engagement average value - Engagement average cost

Typical Conversion KPis

- Conversion rates: proportion of all visits that converts

- Engagement to Conversion ratios: how efficiently the service converts the engaged visits

- Conversion average value: average monetary value of the conversion

- Conversion average cost: average money spent before the conversion occurs

- Conversion average profit: Conversion average value - Conversion average cost

Typical Conversion KPis

- Sustained engagement index: site success in keeping visitors engaged over time

- Sustained converted index: site success in keeping visitors converted over time

- Conversion to Engagement ratios: how the site keeps converted users to make subsequent engaged visits

- Retention average cost: average amount of money spent to retain the one user

- Average number of conversions per user & period: number of conversions done by users on the time period

- Average time between conversions: how long it takes between conversions

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3.2   Creating the Dashboards

The KPIs provide the indications and data for the actors to manage the site and make (hopefully) the right decision. But before they can do that, actors need the KPIs delivered to them. The easiest way to achieve this result is to group the KPIs in Dashboards, delivered to the actors and the analysts.

3.2.1   Analyst versus Business actor dashboards

The concept of "one fits all" does not exist with dashboards. While the data's final destination is with the Business actor, it usually takes it full power from the analysis work done on top of it.

This is why it is important to make a distinction between the Analyst dashboards and the Business actor dashboard.

Analyst dashboards can consist only of KPIs but Business Actors dashboards should also include findings from the Analyst. An analyst dashboard is often automated and delivered by the Web Analytics tool. In contrast, the Business actor's dashboard is typically crafted by the analyst and tailor made.

Here are the main types of dashboards that I have encountered in practice:

- Actor/Role based dashboard. Includes all the KPIs relevant to a given actor plus few extra contextual. Usually very effective with Analysts, less effective with Business stakeholders. Example of Role based dashboards: Financial dashboard, Marketing dashboard.

- Essential goal based, where all the composite KPIs relevant to a given goal are presented and where an analysis of their significance has been added. Usually quite effective for management and a good source of data for executive reports.

- Major goal based dashboard. Includes all the KPIs relating to a site's major goal. Very effective with site where goals are divided amongst organization (for example corporate site).

I must stress here that there is no magic receipe here. The right dashboards are the one that work for you. I personally think that the Actor based and Essential goals one are must have for any site.

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From the goals to dashboards
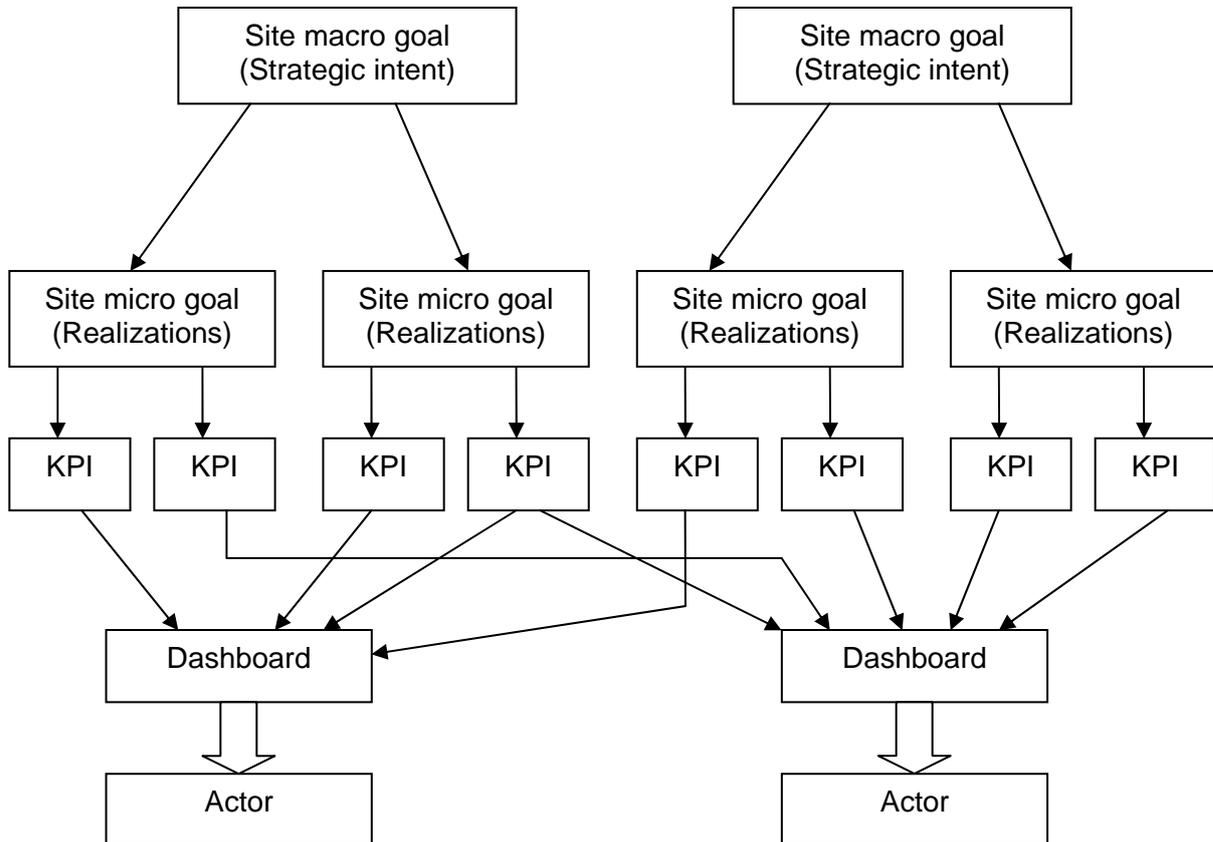
3.2.2   Validating the KPIs and the Dashboards

Once you have the KPIs proposal and the Analyst dashboards proposal, it is time to present them to the actors.

Keep in mind that you left the actors after the workshop with high expectations. Call one or several meetings with them and present your proposal. For each of the KPI, explain:

- What is this KPI for?

- How is it calculated?

- Why this calculation makes sense and what exactly does it tell?

- What can be done to act (ie change the value) on the KPI?

- Who will get it and why (ie who will responsible of it)?

Then present the Dashboards as you have defined them (Remember that one KPI can be reported monthly inside one dashboard and weekly inside another one). Precise:

- What is the Dashboard telling?

- Why are these KPIs in it?

- How often this dashboard will be reported?

- Who will get this dashboard?

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Gather feedback: are the actors satisfied with the KPIs and the dashboards? Do you need to create more?

4   IMPLEMENTATION

4.1   Data sources

We have seen previously that KPIs are calculations rather than metrics. This means that most of your KPIs you will require different data sources to be calculated.

We have previously seen that when presenting the KPIs definitions, you included their calculation. The very first step toward implementation will therefore be to compile a list of this data sources. Since quite often a same source of data is being used by several KPIs, you normally end up with a reasonable list.

Whatever the tool you are using, you'll now need to come up with a plan to tune the tool to provide these datas. Start by listing the data sources that come more or less "out of the box" with your tool. Then turn your attention to the remaining ones. Typically most of these can be obtained by using custom defined segments, custom variables or content categorization.

If you are unsure of the customization needed, most of the tool vendors typically provide consulting services for this very purpose.

It is also very important to document of this work as it is the basis for the implementation plan. Implementation itself is often done in close collaboration with IT.

A common question or problem is: should you limit the KPIs to what you think the tool can offer?. To this, I answer with a big NO. While it is true that some great KPIs can be hard to implement, experience shows that an acceptable compromise is usually available. The other reason why not to limit your KPIs scope is what I call "technology monitoring". Basically, if you find yourself having more and more challenges to implement your KPIs, chances are that your current WA tool is no longer matching your needs and that you should re-evaluate your tool choice. It also usually tells that your level of expertise in Web Analytics has sharply increased.

4.2   Process implementation

Now that you have the KPIs implemented and reported inside dashboards, you need to consider processes.

Any given web site is a living entity with evolving content and evolving goals. This in turn means that your WA implementation will probably cease to match the site fairly quickly unless you incorporate it into the site maintenance processes.

Usually 3 main categories of changes affect WA implementations.

4.2.1   Physical actor change

This happens usually when someone changes job and his/her job definition changes. New actor can appear who does not understand/knows about his KPIs responsibility. To solve this challenge, you'll need to get the WA incorporated inside the job definition (your job includes monitoring and managing the following KPIs…)

4.2.2   Content change/update

KPIs usually depend a lot on content. If content is added, removed or modified, it is important to evaluate the impact on KPIs. For instance a KPI using pages inside a Content group will be affected if the new content is not affected inside the correct Content group. To solve this challenge, you'll need to incorporate the KPIs into the content lifecycle processes (we change this content – we check the impact on current KPIs and act accordingly; we create this content – Does it fit into existing KPIs and if yes, which one?)

4.2.3   Goals & target changes

The existing KPIs panel reflects the site goals. When goals are revised, added or deleted, the KPIs must be updated accordingly.

For a new goal, new KPIs will be most likely needed. To create them, use the process developed in this paper: Goal – Actors – Microactions – KPIs – Dasboard

For a deleted goal, delete KPIs accordingly and make sure the deletion is properly communicated to all actors involved.

For a revised goal, start by listing the affected KPIs and use the methodology to propose the revised KPIs

In short, make sure that the Web Analytics are part of the site processes because it is the only way you will be able to keep the implementation up-to-date.

5   CAMPAIGNS & TESTING

5.1   Campaigns

One of the most commonly asked question in evaluating online success relates to campaigns. Campaigns cost money, and often a lot of it, so measuring their efficiency is very important. But how do you evaluate the performance?

First, campaigns are always a mean to an end. No sane marketer is doing campaigns for the sake of doing campaigns!

The very first step in measuring campaign success is to understand what the campaign is trying to achieve. Just like the site itself, a campaign can aim at reaching any of the following goals :

- Acquire & Reach (typically prelaunch campaign designed to inform target audience

- Engage (typically "new feature/revamp" campaigns designed to improve engagement)

- Convert (the most classical campaign with the "come and buy" approach)

- Retain (typically email campaign to existing converted users trying to get them to reconvert)

From this angle, campaigns should have a final goal but should also have intermediate goals. To evaluate the campaign's success, we'll then evaluate its performance on the final goal and on the intermediate goals.

Campaign final goal	Campaign intermediate goals	Performance visible with
Acquisition	-	Visits, impressions, clicks
Engagement	Acquisition	Engagement index, Engagement levels
Conversion	Acquisition, Engagement	Conversion index, values, time to conversion…
Retention	Acquisition, Engagement, Conversion	Retention index, time to reconversion, engagement index, engagement level

Once you know the goals, look at the corresponding operational KPIs : do you expect the effects of the campaign to be seen on existing KPIs or do you need new temporary KPIs ?

In any case, agree with the marketer on what KPIs will best reflect the campaign performance and deploy accordingly.

Limiting the performance assessment to the final goal would be misleading. Let's take the following example where 2 campaigns, designed to create conversion (purchases), resulted in the results below :

Goals	Campaign A (cost 10 000€)	Campaign B (cost 6 000€)
Acquisition (intermediate)	100 000 visits	25 000 visits
Engagement (intermediate)	Overall 10% of the visits 8% engaged at level 1 2% engaged at level 2	Overall 40% of the visits 13% engaged at level 1 27% engaged at level 2
Conversion (final)	0.5% for a revenue of 5000€	10% for a revenue of 5000€

As we can see, as far as the final goal is concerned, both campaigns performed badly (their ROI is negative in both cases). However, we can see that campaign B was quite successful in its intermediate goals and it can be assumed that the long term effect will be positive. Campaign B was better at engaging its acquired users and was also better at converting them

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I must stress here that this should be done ideally before the campaign starts. Unfortunatly, quite often the campaign is already running before you have a chance to do so. But if the site is been properly measured, using the process described in the previous pages of this paper, you should be able to see the effect of the campaign on the existing KPIs, especially compared to their baseline values.

5.2   Testing

Multi Variables Testing or Split testing usually aims at optimizing the site. There is no real difference between campaigns and A/B in term of measuring success.

Start by defining the test's final goals and derive the list of intermediate goals. Evaluate them using the baseline and composite KPIs to establish what effect the test had on the site.

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6   THE WEB ANALYTICS CHECK-LISTS

I have now presented the methodology. Here are few check lists that you may find useful to manage various situations. While each entry of the list uses the first person, in practice it may involved several people.

6.1   First time Web Analytics deployement or total revamp

- I have identified the decisonnal actors
- I have organized a workshop with them
- I am familiar with the site
- I have collected the site's Major goals
- I have drilled each of the Major goals into Micro goals & Success definition
- I have clarified the target audience
- I have presented the goals to the actors and they have approved them
- I have affected the Micro goals to the AECR model
- I have the list of the Acquisition points, Engagement points, Conversion points and Retention points
- I have created the baseline KPIs from the goals
- I have affected the KPIs to the AECR model
- I have created the Composite KPIs
- I have presented the baseline and Composite KPIs to the actors and they have approved them
- I have compiled & documented the list of data sources
- I have defined the Analyst dashboards
- I have defined the Business dashboards
- I have presented all the dashboards to the analyst and the actors and they have approved them
- I have an implementation plan defined to provide the data sources
- I have the implementation done and the correct data is available
- I have created the Analyst dashboards
- I have the template for the Business dashboards
- I have the KPI & Implementation maintenance processes in place

6.2   Existing Web Analytics deployement partial rework (site & goals change)

- I have identified the scope of the change
- I have identified the decisonnal actors involved in the change
- I have interviewed them
- I have identified the new Major goals (if any)
- I have identified the redundant Major goals (if any)
- I have identified the new Micro goals (if any)
- I have identified the redundant Succes definitions (if any)
- I have identified the new Succes definitions (if any)
- I have presented the revised goals to the actors and they have approved them
- I have affected the new Micro goals to the AECR model

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- I have the updated list of the Acquisition points, Engagement points, Conversion points and Retention points
- I have the new baseline KPIs from the goals
- I have affected the new KPIs to the AECR model
- I have modified the Composite KPIs
- I have presented the new baseline and new composite KPIs to the actors and they have approved them
- I have updated & documented the list of data sources
- I have updated the Analyst dashboards
- I have updated the Business dashboards
- I have presented all the updated dashboards to the analyst and the actors and they have approved them
- I have updated the implementation plan defined to provide the data sources
- I have the revises implementation done and the correct data is available
- I have updated the Analyst dashboards
- I have updated the template for the Business dashboards
- I have updated the KPI & Implementation maintenance processes

6.3   New campaign

- I have identified the campaign's final goal (Acquisition, Engagement, Conversion or Retention)
- I have derived the intermediate goals
- I have identified the baseline KPIs that are most likely to be affected by the campaign
- I have established the baseline values for these KPIs before the campaign launch
- I have created the missing baseline KPIs (if any)
- I have compiled & documented the list of data sources needed for these KPIs
- I have defined the campaign dashboard
- I have the implementation done and the correct data is available