



Recommendations to the BBI JU on effective content formats to future projects

July 2019 (M34)

D4.5: Recommendations to the BBI JU on effective content formats to future projects

WP4

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Bioeconomy Awareness and Discourse Project H2020-BBI-PPP-2015-2-1

Technical References

Project Acronym	BioCannDo
Project Title	Bioeconomy Awareness and Discourse Project
Project Coordinator	Erik Lohse Fachagentur Nachwachsende Rohstoffe e.V. e.lohse@fnr.de
Project Duration	October 2016 – September 2019 (36 months)

Deliverable No.	D4.5
Dissemination level ¹	PU
Work Package	WP 4 - Infohub
Task	Task 4.4 Monitoring of impacts
Lead beneficiary	YOU (ICO)
Contributing beneficiary(ies)	FNR, BTG
Due date of deliverable	31 July 2019
Actual submission date	04 July 2019

¹ PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)

Document history			
V	Date	Beneficiary	Author
1	26/06/2019	YOU (ICO)	Raffaella Moreschi / Elena Gaboardi / Elisabeth Schmid
2	28/06/2019	FNR	Erik Lohse
3	02/07/2019	YOU (ICO)	Raffaella Moreschi / Elena Gaboardi / Elisabeth Schmid

0 Summary

The BioCannDo project aims at increasing awareness of bio-based products among the general public through a set of multiple communication formats, distributed via the AllThingsBio infohub and associated channels.

Communication to the general public and engagement of large audiences have been an integral part of the BioCannDo project and have played a key role since the very beginning. Dedicated communication and engagement campaigns have been designed and regularly monitored throughout the project's lifetime to assess the effectiveness of its communication and engagement formats. Likewise, the continuous **monitoring of indicators** has fed the strategy with inputs and measures necessary to align it to the project's goals and expected impacts.

Thanks to this monitoring activity it has been possible to **assess the most engaging communication tools** used by the BioCannDo project, develop **insights** on its communication formats and **recommendations for the BBI-JU and future projects**.

The main focus of this deliverable, which has been released close to the project's end to develop a comprehensive, evidence-based quantitative and qualitative analysis, provides a list of recommendations on the most effective content formats for the communication of bio-based products to the broader public.

Table of content

0	SUMMARY	3
1	INTRODUCTION	5
2	INSIGHTS ABOUT THE COMMUNICATION FORMATS USED IN BIOCANANDO	6
3	RECOMMENDATIONS TO THE BBI JU	FEHLER! TEXTMARKE NICHT DEFINIERT.
3.1	JOURNALISTIC ARTICLES	12
3.2	WEB VIDEOS	15
3.3	STORYTELLING RESOURCES	17
3.4	FACTS OR MYTHS POSTS	19
3.5	POPULAR SCIENCE QUIZZES	22
3.6	PROBLEM SOLVING POSTS	24
4	CONCLUSIONS	26

1 Introduction

The main objective of the Bioeconomy Awareness and Discourse Project (BioCannDo) has been to increase awareness of bio-based products among the general public. This has to be considered as a major challenge: most people are not fully aware of bio-based products, their potential and how these products can be used in everyday life. For this reason, a dedicated communication and engagement strategy has been designed around the targets' potential information needs and key messages and implemented through a combination of formats and channels.

The project has tackled the original challenge by:

- packaging contents into a variety of communication and engagement formats: journalistic articles, web videos, storytelling resources, facts or myths posts, popular science quizzes, problem solving posts;
- distributing them via the AllThingsBio infohub acting as an information broker of resources about bio-based products, where the website, www.AllThings.Bio facilitates access to trustworthy resources, clear and scientifically sound messages about bio-based products that can be easily understood by the general public;
- measuring their effectiveness in terms of outreach and engagement through dedicated quantitative and qualitative indicators and analyses.

This process has enabled us to test and measure how traditional and more innovative communication formats have reached our audiences providing the necessary evidence (through the continuous monitoring of indicators) to develop the recommendations of the present deliverable.

2 Insights about the Communication formats used in BioCannDo

BioCannDo has devoted a considerable effort to find the best way to communicate scientific evidence to a laymen audience. On this purpose, a bunch of communication formats have been used - each of them with a specific scope and responding to set editorial criteria (such formats are illustrated in detail in the following chapter 3. Recommendations to the BBI JU).

Some conclusions can be drawn at topline level based on our experience. **These have been summarised in the final publication produced by BioCannDo “The BioCannDo experience: Let’s talk about bio-based products – 10 Insights on communicating the bioeconomy”.**

In particular, our project – like many others in the public communication domain – had to resolve what appears to be a conundrum: **is it better to achieve many visits, by using popular communication formats (which are not particularly innovative), or to opt for forms of communication which are more innovative, but will struggle to reach out to large audiences? And how to do this within the boundaries set by the project communication budget?**

While defining the editorial strategy of the project we had to address this issue. The experience we have built up, is summarised in the chapter “The BioCannDo dilemma: finding the right form and angle”. It comes with a set of “Questions to guide your thinking”, which are meant to help other communicators to set the limits of their action and to orientate them in the choice of the most appropriate approach.

In BioCannDo we believe that before establishing a communication strategy, communicators should ask themselves simple questions like:

Questions to guide your thinking	Why?
<ul style="list-style-type: none"> What are the communication models you refer to? Will you ever be able to become as popular as they are? 	These questions will help communicators to set a “best in class” to be regarded as a model to which to aspire. Such exercise will also help projects to keep all their communication actions consistent while aiming at the same goal.
<ul style="list-style-type: none"> What matters to you the most? Do you want to differentiate your project from other communication initiatives, or do you want your message to get across to as many people as possible? 	In media you can’t have it all. Communication initiatives should decide upfront whether their primary goal is to get many views, or to stand out from similar initiatives.
<ul style="list-style-type: none"> Do you want other media to take up and republish your contents? If so, are you familiar with the format requirements dictated by such media? 	Some projects which produce original content are open to have it republished by external online channels. When this applies, they must take into account the technical constraints and the editorial rules dictated by such external resources as this will increase likelihood to be taken-up.

<ul style="list-style-type: none"> • How wide is your target audience? • Are you aiming at the general public or experts? 	<p>It is not possible to engage with all target audiences across the board – a strategic decision needs to be made, which will guide the selection of the formats and channels most suitable to address such primary audience.</p> <p>Residual and less intensive editorial production can be launched not to leave secondary target audiences totally uncovered – but it should not become predominant.</p>
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All these considerations apply to communication projects across many domains and are not to be seen as restricted to the bioeconomy sector. Further elaborations on them have allowed our team to draft three insights related to communication formats.

Each of these insights come with practical “tips” addressed to all those communication professionals who face similar challenges as the ones tackled by the BioCannDo team.

Some of these insights are more relevant to projects in the bioeconomy domain. (The full explanation of the insight together with the rationale behind is provided in the publication “The BioCannDo experience: Let’s talk about bio-based products”). The following insights, focusing on specific communication challenges, have been retrieved from the above mentioned publication as they properly frame the overall context, within which our recommendations have been developed.

Insight #3 - “The trade-off between uniqueness and outreach”	
Finding your own voice and personality has a cost, as it can set you apart from traditional communication platforms	
Reason behind	<p>In AllThings.Bio we have published innovative items like storytelling resources, quizzes, “facts or myths” posts alongside more traditional formats. This mix has contributed to making our project known and to differentiate from other scientific communication initiatives. However, innovative formats tend to live in isolation on AllThings.Bio as the external platforms and websites we use to support our media distribution do not take them up.</p> <p>Had we had more of a standard approach, our initiative would have been unnoticed. But could our message possibly have had a wider outreach?</p>
Practical tips for communicators	<ul style="list-style-type: none"> ▪ Don’t be scared of innovation as long as you have external resources and contacts that support you every step of the way and attract new and fresh audiences to your media channel; ▪ Be pragmatic and identify from the very beginning the media channels you will use to distribute your work. Pay attention to their formats: chances are that these will reject or fail to redistribute your resources if they are incompatible with their requirements.

Insight #4 – “Not all formats suit all channels”**The selection of media content is often dictated by the distribution and advertising budget****Reason behind**

In BioCannDo we planned carefully for our video production as we wanted it to become a distinctive part of our media presence.

No video would have been able to fit all our channels, because different media require video formats strictly adhering to their own rules.

Therefore, we decided to concentrate on the only channel where we could realistically generate significant outreach: Facebook, which is also well adapted for the BioCannDo audience.

The decision to concentrate on Facebook dictated the choice of the format: short live action clips, supported by animations. A small advertising campaign boosted online viewing and quadrupled the number of views.

Practical tips for communicators

- If possible, set aside some money to boost distribution: even a small advertising budget invested on the right channel can make a difference in terms of outreach;
- No video format works well on all the media: before deciding the format, establish first which channel you will use for distribution and stick to its requirements.

Insight #5 – “Dispel consumers’ doubts”**Establishing a virtual dialogue with your readers will help you engage with the public compellingly****Reason behind**

A popular media format follows a “question & answer” (Q&A) model. We decided to adopt it: we put ourselves in the “consumers’ shoes” and produced a series of “Q&A” posts which answer the most common questions and doubts which an average bystander in the street may ask about bio-based products and materials. A similar approach has been followed in the video production.

“Q&A” posts have been well received by the AllThings.Bio readers and have had a good replication on social media.

We believe they have been popular because they resonate well with the readers, who find in our posts the answers they are looking for.

Ultimately, the message relayed through our “question & answer” approach is that when it comes to bio-based products, all questions are legitimate: it is up to manufacturers and communicators to reassure citizens by addressing their concerns in a convincing way.

Practical tips for

- Never trivialise readers’ doubts: the underlying message in your

communicators

communication should be that it is fair to have questions and concerns;

- Keep the conversation practical and down to earth, as people's most basic concerns are usually those which may prevent them from considering the bio-based option;
- Keep your answers factual and put technical references in a side note: this will make you more credible to the readers and prove that your statements are scientifically sound.

3 Recommendations to the BBI JU

When identifying the most effective communication formats on recommendation purposes, multiple elements must be considered: there is no “recipe for success” because no format is able to guarantee impact across all target audiences.

Depending on the scope of the project, its target audiences and its priorities, a mix of different communication formats is usually advisable.

In this paragraph we draw some conclusions based on the BioCannDo experience. These conclusions are both at quantitative and qualitative level.

Quantitative analysis is based on monitoring data, which have been regularly collected and aggregated by format, since the project has started. They allow measuring the impact generated by the project.

Such monitoring activity carried out as part of BioCannDo Task 4.4 has collected an extensive series of data, which have been considered to draw our conclusions. For sake of clarity and agility of the current document, only the most relevant measures are presented. They are:

Total online views	Total visits on the project website AllThings.Bio and on the news multipliers to which AllThings.Bio contents have been distributed (e.g.: Cordis, EU Agenda, AlphaGalileo, Phys.org etc.) whose policy is to share traffic data with our project. When spontaneous take ups have happened on other websites, these have not been included in our calculations.
Average # of online views	The average number of online views generated by each format. The editorial production from AllThings.Bio is not consistently spread across all the formats: the “average # of online views” indicates which format has been able to generate the highest number of views, regardless on the number of issues associated to it.
Engagement rate	The level of interest generated by all communication activities published on AllThings.Bio. It describes the impact our project communication has generated on its community. It is calculated as <i>Total Project Engagement/Total Project Outreach*100</i> . “Engagement” is given by the total online actions performed by online viewers of AllThings.Bio contents (clicks, likes, shares, comments, participation to minisurveys, etc.). The uptake on external resources is considered to be part of the engagement rate with the AllThings.Bio online content.

To make our recommendations more insightful, the quantitative analysis based on outreach data has been integrated by a qualitative dimension.

This qualitative evaluation is based on the expertise, which we have built up in the course of the years while looking after the communication of many EU projects and supporting actions. Feedback received upon exchange with other bioeconomy actors has also been considered as well.

Our qualitative analysis has been articulated upon three elements:

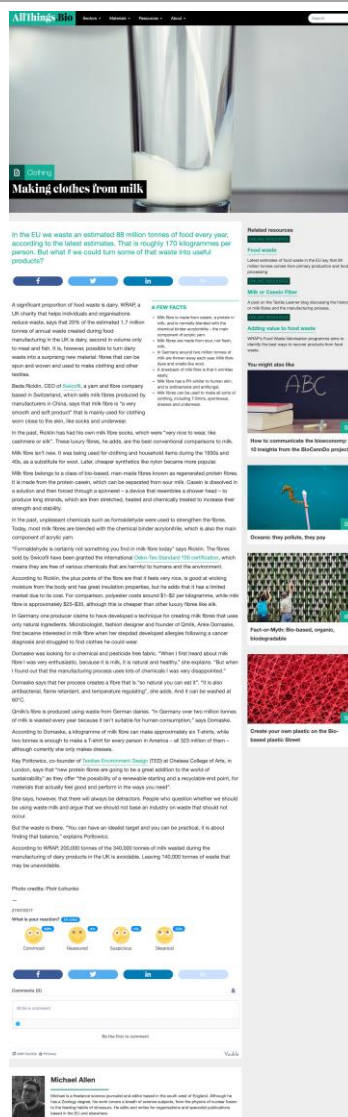
Uniqueness	The ability of a communication format to differentiate itself from the others and to be perceived as “new and different” by consumers. In this piece of analysis, “uniqueness” is not only related to the “originality” of the format <i>per se</i> , but the context where a certain communication format has been used in AllThings.Bio.
Synergy with other AllThings.Bio formats	The ability to “work together” with other formats by attracting visits towards the whole set of resources published on AllThings.Bio. Formats with high synergy with others act as multipliers for the other resources, which have been published on the project website and encourage online visitors to navigate across.
Ease of replication on external platforms	The likelihood for other online platforms external to the project to be re-published AllThings.Bio contents.

3.1 Journalistic articles

Definition

The AllThings.Bio journalistic articles have a focus on bioeconomy related topics and are addressed to the general public. They are written by professional journalists who interview experts (from the research community or business representatives) to guarantee a balanced approach and illustrate the multiple facets of the issue. An independent approach is kept and when appropriate, cons are illustrated alongside pros. The reading time of our articles ranges from 1 to 2 minutes. Our journalistic articles are published alongside factsheet boxes (summarizing the key points outlined in the post) and a list of related sources, for those readers who want to know more about the topic.

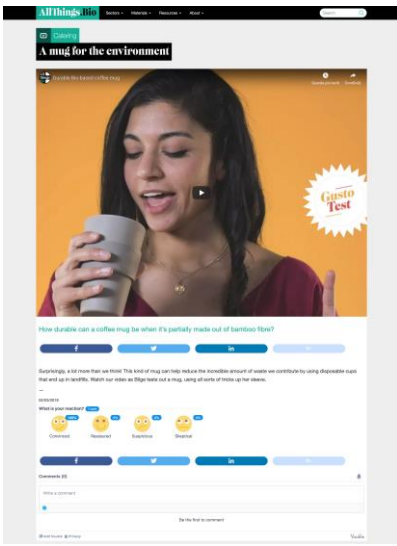
Look and feel



Example	“Making clothes from milk” http://www.allthings.bio/making-clothes-milk/	
Monitoring outreach data	<p>Total online views: 133,155 Total social impressions: 82,214</p> <p>Low Medium High</p> <p>< ————— ></p>	<p>Very High, representing some 38% of total publications’ outreach thanks to an effective distribution strategy on information multipliers (104,808) and a relevant number of impressions on social media (82,214). Online views on project website are limited.</p>
	<p>Average # of online views: 10,768</p> <p>Low Medium High</p> <p>< ————— ></p>	<p>Medium to High, slightly above project’s average, but considerably higher than most of other formats excluding videos.</p>
	<p>Engagement rate: 2.5%</p> <p>Low Medium High</p> <p>< ————— ></p>	<p>Medium, around average. However, with project’s average strongly impacted by the strong performance of videos, articles prove to be quite an effective tool to engage with the target audience. Engagement on information multipliers (downloads from Alphagalileo) leads; activities on social media are more limited than for videos.</p>
Qualitative assessment	Uniqueness	
	<p>◆◆◆◆◆</p> <p>Low – Across all the communication formats used in AllThings.Bio, journalistic articles are the ones with which consumers are most familiar. This facilitates acceptance, as many readers see articles as a straightforward way to get a better understanding of a topic.</p> <ul style="list-style-type: none"> - The drawback is that people sometimes tend to confuse professional journalistic articles (which abide to strict editorial and independence rules) with the posts published on many websites and blogs (which can have a promotional purpose or deliver misleading information). The blurred line between the two contributes to generating scepticism towards the message we want to relay as a project. 	
	Synergy with other AllThings.Bio formats	
	<p>◆◆◆◆◆</p> <p>Medium - Technically all the journalistic articles can be cross-referenced to the other online sources produced by BioCannDo.</p> <ul style="list-style-type: none"> - In our project we have made the editorial choice to privilege inbound links. In practical terms this means that AllThings.Bio journalistic articles are regularly quoted as a resource from other AllThings.Bio 	

	<p>editorial products (story telling resources, quizzes, etc.). However, our journalistic articles do not point towards the other online contents produced by the project. Hopefully, this will get readers to appreciate our independence: we do not want our articles to be seen as advertorials of the AllThings.Bio brand nor as a way to “sell” the bio-based products at all costs.</p>
	<p style="text-align: center;">Ease of replication on external platforms</p>
	<p style="text-align: center;">◆◆◆◆◆</p> <p>High – Technically the AllThings.Bio journalistic articles can be easily replicated on most online platforms, which drives online views.</p> <ul style="list-style-type: none"> - Replication is positively encouraged by project as long as BioCannDo is credited as the content source. Even in case the source is not directly mentioned, it is worth promoting and pushing journalistic contents for replication on other external platforms as our key objective is to spread the key messages on bio-based products to as many people as possible.
<p>Recommendations</p>	<ul style="list-style-type: none"> - Independent journalistic articles are a fundamental resource for BioCannDo, as they allow our key message to get through to a potentially wide audience in an effective manner. - When it comes to communicating to consumers, they are the most obvious solution. - Our challenge is to set ourselves as a credible and authoritative resource up to a point where other sector portals do take up our content and mention our articles as a reference.

3.2 Web Videos

Web videos		
Definition	<p>BioCannDo has produced a series of eight short web videos, featuring bio-based products of common use: household cleaners, T-shirt, coffee mug, lipstick, hand soap, toy-truck, tableware, straws. The format used is that of a “live action” video where a testimonial tests a bio-based product and answers questions consumers might have about it. Key facts are highlighted by graphic animations. These videos have been designed to be published and shared on Facebook. They have been released in two batches: the launch of each batch has been supported by a Facebook Advertising campaign which has run in the month following the release.</p>	
Look and feel		
Example	<p>“A mug for the environment” (coffee mug) http://www.allthings.bio/video/a-mug-for-the-environment/</p>	
Monitoring outreach data	<p>Total video plays (on Facebook and YouTube): 107,854</p> <p>Total social impressions (on Facebook, YouTube and Twitter): 135,185</p> <p>Low Medium High</p> <p>< ————— ></p>	<p>High, representing one fourth of total publications’ outreach, second only to articles.</p>
	<p>Average # of online views: 13,481</p> <p>Low Medium High</p> <p>< ————— ></p>	<p>Very High, the most effective format to attract viewers, nearly doubling average project publications’ outreach.</p>

	<p>Engagement rate: 4%</p> <p>Low Medium High</p> <p>< ————— ></p>	<p>Very High, by far the most engaging format, driving strong activities and interactions on social media.</p>
Qualitative assessment	Uniqueness	
	<p>◆◆◆◆◆</p> <p>Medium – Live action videos are fairly common on social media.</p> <ul style="list-style-type: none"> - However, it is the choice of relaying scientifically sound facts with a playful tone of voice in the context of a project like BioCannDo that makes our video production unique. 	
	Synergy with other AllThings.Bio formats	
	<p>◆◆◆◆◆</p> <p>Low – The AllThings.Bio web video clips attract inbound views via cross links from other online items produced by the project.</p> <ul style="list-style-type: none"> - However, they are not suitable to point visitors towards external resources. This is also due to technical constraints (web videos must abide to the rules set by the social media channels where they are published, which set very strict conditions to having links in the videos). 	
Recommendations	Ease of replication on external platforms	
	<p>◆◆◆◆◆</p> <ul style="list-style-type: none"> - High – All our web video clips have also been published on YouTube, which makes it possible for anyone who is interested to embed them in their own website. BioCannDo has encouraged this behaviour to boost outreach potential. - Investing even a small budget on social media advertising associated to videos (which are still considered as the most powerful form of social media contents) is increasing the replication and sharing potential with broader communities 	
Recommendations	<ul style="list-style-type: none"> - The AllThings.Bio video production has been received very positively by the public and is one of the assets of the project communication. - The Facebook Advertising campaign which has been launched to promote the video production has significantly boosted the amount of page views and video plays compared to the expected organic views. - The choice to design the videos according to the criteria set by the distribution channel has been successful and is strongly advised. 	

3.3 Storytelling resources

Storytelling resources		
Definition	<p>Multimedia storytelling resources are an innovative communication format which is used to present complex contents in the form of a narrative by combining a mix of texts, images, videos, animations and external links. The storytelling resources produced by BioCannDo come with links to other contents and online items on the same topics, which have been developed by the project. AllThings.Bio has published four storytelling resources about household cleaning products, insulation materials, food packaging and the Bioeconomy in general. The storytelling resources produced by AllThings.Bio have been implemented through Pageflow®.</p>	
Look and feel		
Example	<p>“BioBased household cleaners” http://www.allthings.bio/pageflow/bio-based-household-cleaning-products/</p>	
Monitoring outreach data	<p>Total online views: 6,151 Total social impressions: 22,118</p> <p>Low Medium High </p>	<p>Low, accounting for less than 5% of total publications' outreach. Most of views happened on social media, Twitter in particular.</p>
	<p>Average # of online views and social impressions: 7,067</p> <p>Low Medium High </p>	<p>Low to Medium, with significant differences driven by the specific content of the Pageflow. Consumer oriented contents (e.g. cleaning products) proved very effective on social media</p>
	<p>Engagement rate: 1.3%</p> <p>Low Medium High </p>	<p>Low due to no uptake on external resources and little interactions on social media compared to outreach</p>

Qualitative assessment	<p style="text-align: center;">Uniqueness</p> <p style="text-align: center;">◆◆◆◆◆</p> <p>Fairly unique - Consumers are increasingly exposed to multimedia communication solutions like ours. Nevertheless, the AllThings.Bio series of slideshows is still perceived as fairly unique in the panorama of the supporting actions and research projects. Their release has generated some buzz in the stakeholder community, where our effort to communicate with an original touch has not gone unnoticed.</p>
	<p style="text-align: center;">Synergy with other AllThings.Bio formats</p> <p style="text-align: center;">◆◆◆◆◆</p> <ul style="list-style-type: none"> - Very high - in principle, all the contents developed by BioCannDo on the same topic can be integrated into the storytelling resource. For example, AllThings.Bio video footage has been used as background animation. - Our thematic slideshows can be seen as small portals facilitating access to the whole wealth of information which has been created or selected by the BioCannDo team. Such synergic approach is not only technically possible, but it is to some extent advisable. To make sure readers fully appreciate the scientific soundness behind “the story”, all contents must be backed up by the relevant sources.
	<p style="text-align: center;">Ease of replication on external platforms</p> <p style="text-align: center;">◆◆◆◆◆</p> <ul style="list-style-type: none"> - Very low, as this format requires Pageflow®. In practical terms, this means that it is not possible to copy or integrate our slideshows onto external online platforms, unless of embedding it as i-frame or producing a dedicated news item embedding a link to the storytelling resource.
	<p style="text-align: center;">Recommendations</p> <ul style="list-style-type: none"> - This format has a high potential, but it is not always the best solution: it works best when it comes to explaining a very specific topic, which can easily be summarised into max 15 slides. The format dictates the structure and content selection: texts must be extremely concise and self-explanatory, which cannot always be attained. - Technically it is not possible to “copy and paste” from a Pageflow® slideshow, which might alienate visitors looking for “easy to collect” contents. - As this format is entangled with the Pageflow® software, it is hard to export it onto external websites. This means that the slideshows are likely to be uniquely watched via the project portal and each release must be promoted through all the project communication channels, otherwise visits might be low.

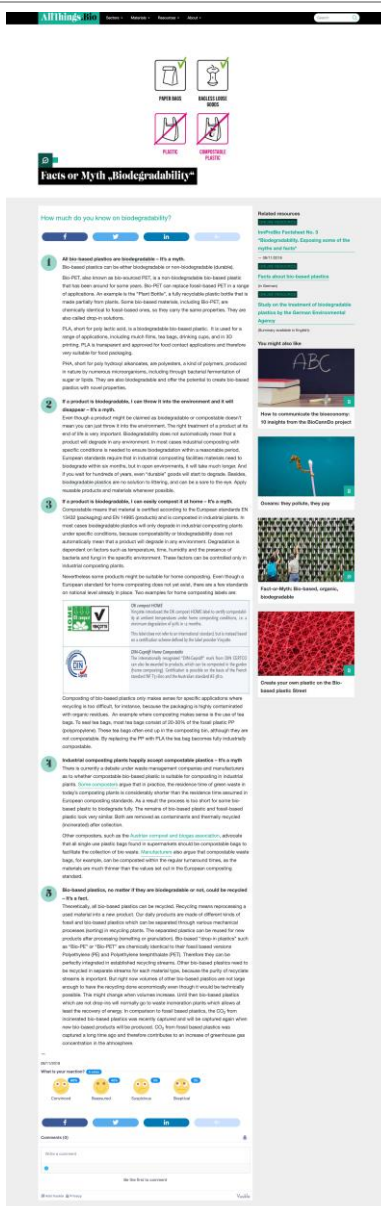
3.4 Facts or myths posts






Facts or myths posts


Definition

Facts or Myths posts tackle controversial issues of public interest by challenging misconceptions and prejudices (or “myths”) on scientific grounds. The post is structured into a short set of statements, which are classified as “facts” or “myths”, followed by a brief explanation. Besides increasing awareness of the bioeconomy, this format is meant to attract new visitors onto the AllThings.Bio platform and encourage them to share content on their social pages.

Look and feel



Example	Biodegradability: Facts or myths http://www.allthings.bio/fact-or-myth/facts-or-myth-biodegradability/	
Monitoring outreach data	Total online views: 7,456 Total social impressions: 11,802 	Low , contributing to some 3.4% of total project outreach, mainly driven by impressions on social media.
	Average # of online views: 9,629 	Medium , with significant differences between the two publications in the project.
	Engagement rate: 1.1% 	Low , the least engaging format experimented, maybe because it implies sharing/expressing controversial opinions.
Qualitative assessment	Uniqueness  Medium – Many online portals (with some valuable examples from the mass media) publish similar posts. Although their look and feel might vary significantly across, they all have in common their schematic structure and the fact of addressing popular misconceptions about science. - What makes the difference among all these initiatives is the layout and the way scientific contents are relayed. “Best in class” mainstream media tend to make an extensive use of visual and interactive tools which take such resources into the “edutainment” territory. Conversely, the AllThings.Bio’s “Facts or myths” posts (and the majority of similar examples available online) are all about contents and key messages, with no multimedia element in them.	
	Synergy with other AllThings.Bio formats	
	 Medium – it is possible to insert in a “Facts or myths” post links to other online resources published on AllThings.Bio. Nevertheless, we have kept cross referencing to the minimal, to make the structure agile, quick to read and let the key message stand out. In fact, these posts are intended as a way to satisfy an information need from those readers who want a straight answer and are not interested in probing the concept too much.	
	Ease of replication on external platforms	


	 <p>Medium - like all “textual” posts, their replication onto external resources is relatively straight-forward. Nevertheless, their streamlined structure and the fact that there are structures into a series of questions might hamper uptake.</p>
Recommendations	<ul style="list-style-type: none"> - This format is definitely worthwhile for communication projects which feel entitled to take a clear and strong position as to a certain topic. The message is usually conveyed in a clear manner and it does not leave much room for commenting and debates – which goes against the “open discussion” trend encouraged by social media. - Much of the success of the format might be linked to its graphics and its multimedia element: more a daring layout might help differentiating it from neutral posts in the readers’ perception.

3.5 Popular science quizzes

Popular science Quizzes		
Definition	<p>The AllThings.Bio quizzes are an entertaining way for readers to test their knowledge of the basics of bio-based products or other aspects related to the bioeconomy.</p> <p>To encourage participation, their content is deliberately simple.</p> <p>The tone of voice is entertaining and playful; after the player has selected an answer, a short explanation note pops up to indicate what the correct response is. The pop-up explanation comes with links to external resources, where readers can find additional information about the topic.</p>	
Look and feel		
Example	<p>Quiz#2 “Gear up and test your knowledge on biofuels”</p>	
Monitoring outreach data	<p>Total online views: 793 Total social impressions: 15,074</p> <p>Low Medium High</p> <p>< —————></p>	<p>Low, representing less than 3% of total publications outreach. More than 85% of views happened on Twitter, with Facebook dramatically lagging behind (less than 10%).</p>
	<p>Average # of online views: 3,173</p> <p>Low Medium High</p> <p>< —————></p>	<p>Very low, 1/5 of total average outreach. It should be noted though that quizzes leverage a more limited number of channels (website and social media) compared to other publications, which are also distributed through information multipliers.</p>
	<p>Engagement rate: 3.7%</p> <p>Low Medium High</p> <p>< —————></p>	<p>Very High, when considering in the perimeter also the number of viewers who completed the questionnaire. Quizzes are engaging by definition as they imply an active interaction</p>

		with content.
Qualitative assessment	Uniqueness	
	 <ul style="list-style-type: none"> - High uniqueness - Popular science quizzes are different from the communication formats traditionally used to cascade down scientific contents to a laymen audience. Consumers are positively stimulated by the informal approach and the playful tone of voice, which capture the attention of readers who would not otherwise have an interest in the topic. - The educational goal of the exercise is subtle and becomes evident only in the explanation boxes, which uninterested readers are free to skip. Nevertheless, the correct answers are provided straight-away, which will get players to learn the basics during the test. 	
	Synergy with other AllThings.Bio formats	
	 <ul style="list-style-type: none"> - Scope for synergy with other formats is very high, as in principle all the online resources which have been published on the AllThings.Bio portal can be used to substantiate the correctness of the answers and for additional referencing. - However, readers' motivation plays a role. Only those players who are really stimulated by the subject are likely to visit the resources linked from the quiz, as by clicking on them they would be diverted away from the quiz. 	
Recommendations	Ease of replication on external platforms	
	 <ul style="list-style-type: none"> - Very low - Quizzes software dictate the format, structure and layout. This makes it virtually impossible to export an online quiz onto an external platform, unless this is re-developed from scratch. - This means that our quizzes live uniquely on our portal: to ensure massive participation, a promotional effort is necessary. 	
Recommendations		<ul style="list-style-type: none"> - As a communication resource, Popular science quizzes have a good potential and can be a valid (yet not exhaustive) way to communicate contents which in the consumers' perception are too complex, scientific or too simply too daunting. When they are part of a project communication, however, it is important to keep them relatively short and simple: it would be inappropriate to use quizzes as a way to relay contents requiring technical expertise. - Informal tone of voice is recommended, as long as references to scientific resources are provided, to prove that contents are scientifically sound. - Due to self-selection bias and the difficulty to control the sample, science quizzes should not be interpreted online surveys.

3.6 Problem solving posts

Problem solving posts	
Definition	<p>“Problem solving posts” give practical explanations to address issues and enquiries that consumers may have about bio-based products. Where appropriate, these posts are articulated into small paragraphs or as sets of “question & answers”. As they act as a hook to start a conversation with a layman audience their tone of voice is simple and factual.</p>
Look and feel	
Example	<p>How to dispose of bio-based plastics? http://www.allthings.bio/dispose-bio-based-plastics/</p>

Monitoring outreach data	<p>Total online views: 35,719 Total social impressions: 28,216</p> <p>Low Medium High</p> <p>< ———— ></p>	<p>Medium, contributing to more than 10% of the total outreach achieved within the project, driven, though, by few posts</p>
	<p>Average # of online views: 6,394</p> <p>Low Medium High</p> <p>< ———— ></p>	<p>Low to Medium, with 2 posts outstanding and all others showing below average views</p>
	<p>Engagement rate: 2.3%</p> <p>Low Medium High</p> <p>< ———— ></p>	<p>Medium: just slightly below average engagement rate, thanks to activities across all channels and in particular on multipliers (downloads from Alphagalileo)</p>
Qualitative assessment	Uniqueness	
	<p>◆◆◆◆◆</p> <p>Low – This format is fairly common on the web.</p> <ul style="list-style-type: none"> - The common trait which identifies the “problem solving posts” produced by BioCannDo is their focus on bio-based consumer products. 	
	Synergy with other AllThings.Bio formats	
	<p>◆◆◆◆◆</p> <ul style="list-style-type: none"> - High – Problem solving posts have been extensively referenced in the AllThings.Bio production to back-up the message relayed by other formats. 	
	Ease of replication on external platforms	
	<p>◆◆◆◆◆</p> <ul style="list-style-type: none"> - High – in principle, any online website can easily replicate this post. Its simple structure, often presented as a set of “question & answers”, makes it more appealing for the online platforms with an educational ambition. 	
Recommendations	<ul style="list-style-type: none"> - Although relatively straight-forward, this format has been positively received by the AllThings.Bio viewers and in some instances quoted as a reference by others. - Its simple structure makes it an effective touch point with consumers with no knowledge about bio-based products. - In order to resonate with all readers, the language must be simple without trivializing the subject – the message to convey is that all questions are legitimate and are worth an answer. - Where questions are used, it is important to select them carefully in order to ensure detection by search engines. 	

4 Conclusions

The quantitative and qualitative assessment of the effectiveness of the content formats tested in the course of the BioCannDo project in reaching out and engaging the general public brings us to the following conclusions:

- More traditional content formats, such as journalistic articles as well as web videos, have proven to be more effective in terms of outreach than the most innovative ones. They are not highly unique formats but can guarantee ease of replication on other external sources;
- In terms of engagement, videos confirm to be the most engaging format, especially on social media. For this reason, allocating even a small budget on social media advertising especially related to video formats can boost the outreach and engagement impact. Even more innovative formats, such as quizzes, which by nature are aimed at stimulating engagement, have had a positive impact on users.
- More innovative contents formats, such as storytelling resources and quizzes can easily find synergies with other formats but ease of replication on external sources is very low, due to their technical structure.

The following table summarizes the main quantitative and qualitative assessment of each format

Formats	Quantitative assessment			Qualitative assessment		
	Total online views	Average online views	Engagement rate	Uniqueness	Synergy with other formats	Ease of replication
Journalistic articles	Very high	Medium to High	Medium	Low	Medium	High
Web videos	High	Very High	Very High	Medium	Low	High
Storytelling resources	Low	Low to Medium	Low	High	Very High	Very Low
Facts or myths	Low	Medium	Low	Medium	Medium	Medium
Popular science quizzes	Low	Very Low	Very High	High	Very High	Very Low
Problem solving posts	Medium	Low to Medium	Medium	Low	High	High

Overall our final recommendations to the BBI JU on effective content formats very largely depend on the communication and engagement strategy each project decides to follow.

The two main questions each project has to address when communicating to the public is the one highlighted in the BioCannDo final publication (“The BioCannDo experience: Let’s talk about bio-based products – 10 Insights on communicating the bioeconomy”) and reported in the Insights chapter (2) of this deliverable: **is it better to achieve many visits, by using popular communication formats (which are not particularly innovative), or to opt for forms of communication which are more innovative, but will struggle to**

reach out to large audiences? And how to do this within the boundaries set by the project communication budget?

In the end, the right mix of formats and channels has proven to be the right recipe to find a balanced solution to attain our two main objectives: increase outreach and engagement on bio-based products. Taking into account BBI-JU's ultimate goal, namely to stimulate the acceptance and use of bio-based products, the role of communication is not only a matter of raising public awareness, when it comes to the mission of actually changing behaviour in society and to do this multiple routes need to be explored.