SYSTEMIC
Circular solutions for biowaste

Cover Delivery Report

Title of the Deliverable:	**Dissemination Materials (year 2)**
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Date of approval by the Coordinator	**25-09-2019** Postponement of the delivery date to 30 September has been approved the project officer

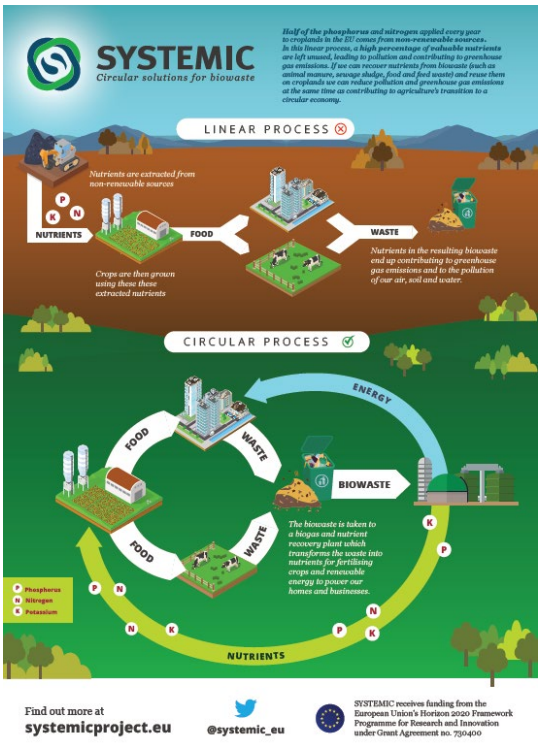
The research was undertaken as part of the project called 'SYSTEMIC: Systemic large-scale eco-innovation to advance circular economy and mineral recovery from organic waste in Europe. https://systemicproject.eu/

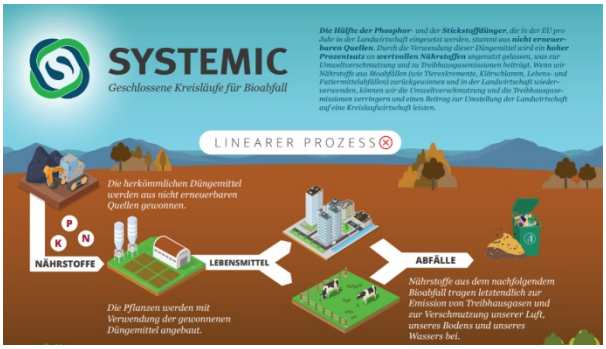
This project has received funding from the European Union's H2020 research and innovation programme under the grant agreement No: 730400. SYSTEMIC started 1 June 2017 and will continue for 4 years.

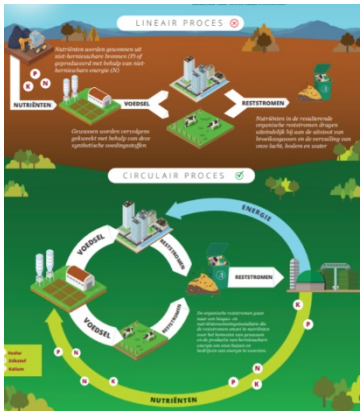
The following SYSTEMIC dissemination materials were completed between 1 June 2018 and 30 September 2019:

- Infographic in English, Dutch, German and Italian
- Video in English, Dutch, German and Italian
- Newsletter issue 2 (March 2019)
- Newsletter issue 3 (July 2019)
- Information sheet for biogas residents
- AM-Power plant poster illustrating the technology, process and products (English)
- Acqua & Sole plant poster illustrating the technology, process and products (English)
- Benas plant poster illustrating the technology, process and products (English & German)
- Updated Dissemination and Communication plan (see below).

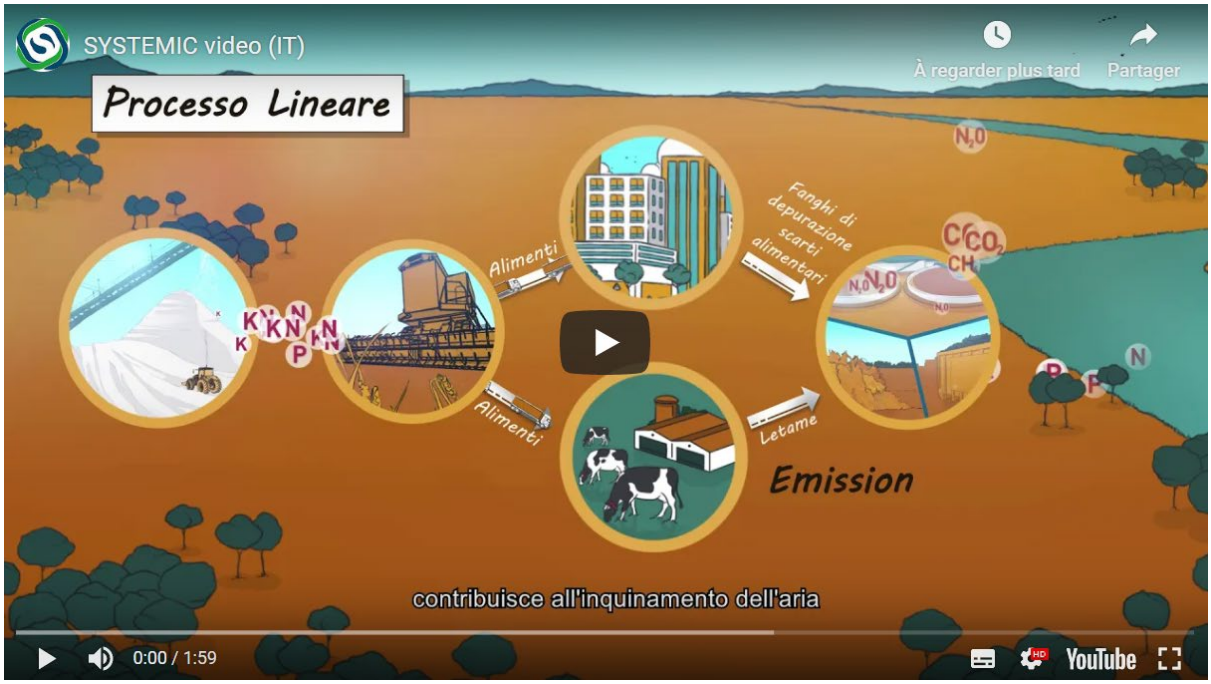
SYSTEMIC Infographic







SYSTEMIC video



Newsletter issues 2 and 3

View this email in your browser

SYSTEMIC newsletter

Issue 2 | March 2019

SYSTEMIC

SYSTEMIC – Systemic large scale eco-innovation to advance the circular economy and mineral recovery from organic waste in Europe – is a project funded by the European Commission, under its Horizon 2020 programme. It aims to demonstrate the economic viability of recovering and recycling nutrients from biowaste, such as animal manure, food waste and sewage sludge, for agricultural production. The project involves 15 consortium partners and was launched in June 2017.

Watch our new video!

Producing renewable energy and nutrients from waste can be a viable business and strengthen our circular economy – the SYSTEMIC project works to show how this can become reality across Europe.

NEW SYSTEMIC Infographic

Find out how recovering nutrients from biowaste and re-using them on croplands can contribute to the transition of agriculture to a circular economy.

View this email in your browser

SYSTEMIC newsletter

Issue 3 | July 2019

SYSTEMIC

SYSTEMIC – Systemic large scale eco-innovation to advance the circular economy and mineral recovery from organic waste in Europe – is a project funded by the European Commission, under its Horizon 2020 programme. It aims to demonstrate the economic viability of recovering and recycling nutrients from biowaste, such as animal manure, food waste and sewage sludge, for agricultural production. The project involves 15 consortium partners and was launched in June 2017.

Fill in our survey on treatment of digestate and spread the word!

Help us put together information on **digestate treatment** to feed into a **database** and **calculation tool** providing **cost-benefit analyses of existing technologies – fill in our survey!**

The calculation tool will be made publicly available at the end of the SYSTEMIC project in 2021.

You can fill in the survey in Dutch, English, German, French, Spanish and Italian. Please complete the survey as fully and correctly as possible. Your anonymity is guaranteed.

By filling in the survey, you can win an invitation to one of the SYSTEMIC Living Lab meetings in 2019-2021. Find out more! Thank you in advance for your contribution to this project!

SYSTEMIC open-access article on bio-based mineral fertilisers from agricultural waste

The SYSTEMIC project published an open-access article on 'Production and performance of bio-based mineral fertilisers from agricultural waste using ammonia stripping–scrubbing technology' in the Waste Management Journal (April 2019).

Ammonium sulphate (AS) and ammonium nitrate (AN), end-products of (stripping–) scrubbing technology, are currently listed by the European Commission as high-priority products with the potential of replacing synthetic N fertilisers. Their legal acceptance will be highly dependent on a critical mass of scientific evidence.

The **results of the study** indicate that no significant differences in respect to product characterisation and fertiliser

Information sheet for biogas residents

Biogas plants:
what impact on my local community?

SYSTEMIC
Circular solutions for biowaste

Living in an area that hosts a biogas plant can raise concerns about: 1) safety; 2) noise; 3) odour; 4) local transport, but here is why these are not to be worried about.

First and foremost, biogas plants are often large-scale plants that are obliged to comply with safety requirements and environmental risk aspects, and minimise the impact on the local community.

1. Safety is a must!
Biogas plant operators are obliged to implement standard precautionary measures – such as good work practices, gas sensors, safety walk-throughs, protective equipment for the staff, adequate ventilation – in order to identify potential hazards and minimise the risks associated with biogas (a mixture of different gases produced by the breakdown of organic matter in the absence of oxygen).

For maximum safety, biogas is always stored under low pressure and the excess biogas is burnt off to remain below authorised capacity.

2. Noise can be efficiently prevented!
Plants operators can take measures to do an appropriate layout of the 'noise sources' on the plant and soundproof those. Moreover, strict noise standards are applied in agricultural areas. The average noise level outside buildings or containers is only around 30 dB. By comparison, the sound of a computer is about 40 dB.

3. Odour nuisance can be avoided!
Odours originate mainly from the transport and storage of the incoming and outgoing material. A closed reception hall, equipped with extraction and air treatment units, prevents odours from spreading.

In addition, different solutions are used for different types of raw materials (feedstock) to minimise odour spreading, including closed storage tanks or silos, manure cellars and bunkers with air scrubbing.

The biological process used in biogas plants – Anaerobic Digestion – greatly reduces unpleasant odours, has a sanitation effect on feedstock, and the heat it generates reduces the germination power of weed seeds present in the feedstock.

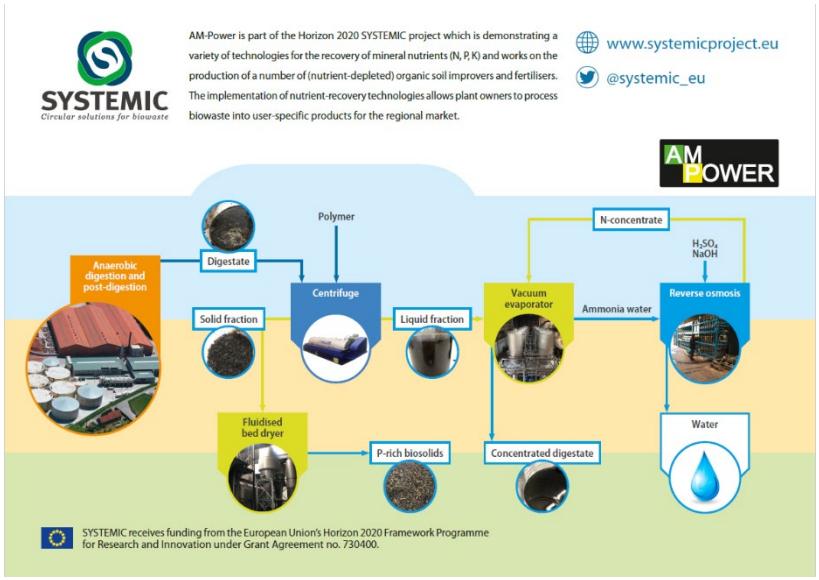
4. Local transport is not disrupted!
The delivery of biomass (plant or animal material used for energy production) to the biogas plant will cause more locally concentrated transport, depending on the size of the biogas plant. However, the traffic plan, usually part of the environmental license application, imposes strict routes to transporters. Moreover, biomass transport is only allowed during working days.

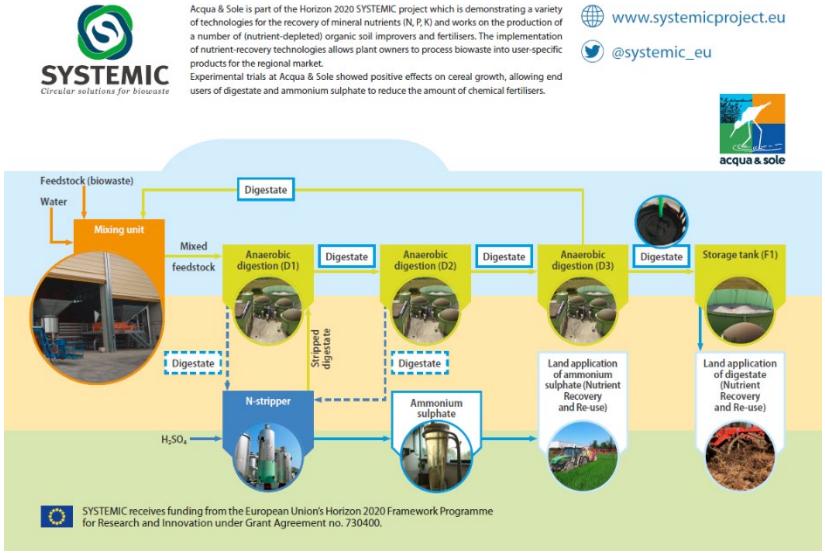
What do biogas plants do?

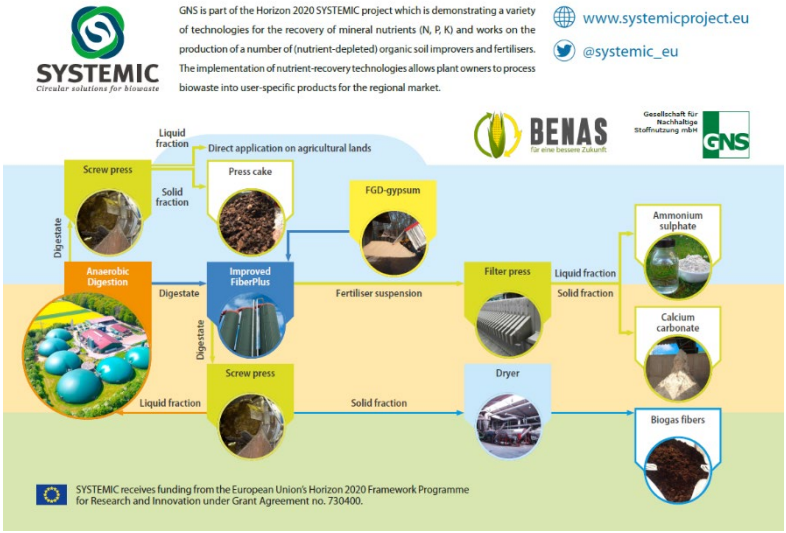
Biogas plants collect biowaste – such as manure, sewage sludge, food and plant waste – and put it through a biomethane for injection into the gas grid.

recovery. This involves the abstraction of (a part of) the nutrients – mainly phosphorus, nitrogen and potassium –

SYSTEMIC demonstration plant posters







Dissemination and Communication plan_updated version 2

DISSEMINATION PLAN

Updated – Version 2

November 2018

Contents

Objectives of the Dissemination Plan [WHY]

SYSTEMIC dissemination objectives

- To showcase nutrient recovery from biowaste at real large scale biogas plants in terms of balances, produced products and business viability.
- To increase the access of potential adopters to the project business plans.
- To increase awareness and acceptance of nutrient recovery plants and the use of recovered nutrients by promoting the contribution that the plants can make to the uptake of the circular economy, Sustainable Development Goals (SDGs), the environment and rural economies (jobs and growth).
- To work to promote a coherent policy framework that promotes rather than restricts the EU wide roll out of business models based on successful demonstration plants.

Target audience and Message [TO WHOM and WHAT]

All messaging about the project should tackle the following pillars where relevant:

- Benefit to the environment - contribution to the SDGs and COP21 (21st Conference of Parties of the UN Framework Convention on Climate Change (UNFCCC[1]), soil quality (and the impacts thereof).
- Economic – contribution to a more circular economy, rural economy, potential to reduce farmer production costs, development of SMEs[2] in rural areas, the value added to existing plants, valorising waste.
- Social – through investments and jobs, an injection into improving rural livelihoods
- Political – contribution to EU policy development (overcoming current bottlenecks, policy cohesion).
- Innovation – the new nutrient recovery techniques being rolled out during the project.

Policy Makers

European Commission – DG Agri[3], DG Env[4], DG RTD[5], DG GROW[6], JRC[7], MEPs[8], Member State representatives in Brussels (and national policy makers in member states), NGOs and industry representatives whose support can strengthen the voice of the project. In particular, the policy work will focus on the upgrading of Nitrates Directive, and the New Fertilisers Regulation.

Message: To use science based arguments to push to relieve policy bottlenecks and promote the development of policy that will support the nutrient recovery sector. To work to promote the concept of the project amongst policy focused NGOs and industry representatives.

[1] United Nations Framework Convention on Climate Change
[2] Small and medium sized enterprises
[3] European Commission Directorate General for Agriculture and Rural Development
[4] European Commission Directorate General for the Environment
[5] European Commission Directorate General for Research and Development
[6] European Commission Directorate General for Internal Market, Industry, Entrepreneurship and SMEs
[7] European Commission Directorate General Joint Research Council
[8] Members of the European Parliament

Innovators and Industry

Potential adopters, end users, input suppliers and food chain actors. This will include farmer organisations, fertiliser companies, municipalities, biogas plants and entrepreneurs and investors interested in this area, food processing and retailing companies.

Message: Two levels: first to encourage and promote the uptake of the business model developed in this project by other users; second to inform and promote acceptance amongst the food chain actors regarding the purchasing of agricultural products which have used nutrients recovered from waste and/ or soil improvers.

Public

Communities local to the demonstration plants, European citizens and consumers.

Message: To inform and give access to the local communities to the demonstration plants to allay fears regarding noise, pollution, smell etc. and explain the benefit that the location of such plants can give to the local rural economy. To the wider European citizen to promote the benefits of recovering nutrients in terms of the environment and planetary boundaries, circular economy, COP21 etc. and to open the discussion and dispel myths concerning food safety.

Research Communities

Researchers, universities and research bodies working on nutrient recovery.

Message: To publish and share project results to create synergies that lead to further innovation on nutrient recovery processes.

Content

For SYSTEMIC to be able to disseminate and communicate effectively, all the consortium partners need to be engaged in the process by disseminating their work at the MS/regional/local level and by providing RISE with regular material to support the central dissemination process. This can include photos and text updates of the plants themselves (installation of equipment, daily working of the plant, testing the recovered products, farmers picking up products, applying the products in the fields etc.), or in the lab testing the products from the plants, visits to outreach plants, speaking at events, meetings with policy makers etc.

Three stages of dissemination

1. Start of the project and ongoing
   The aims and format of the project and the possible impact (see above messaging).
2. Throughout the project
   Project updates (twitter, website, meetings, newsletter, conferences). To include updates on the project – development of the sites, policy work, initial results as they emerge.
3. End of project
   Policy briefs, synthesis document, business plans

Branding and logo

- All dissemination material should have with the SYSTEMIC logo and should refer to the SYSTEMIC website: www.systemicproject.eu
- All official material should display the logo of the EC and the following sentence:

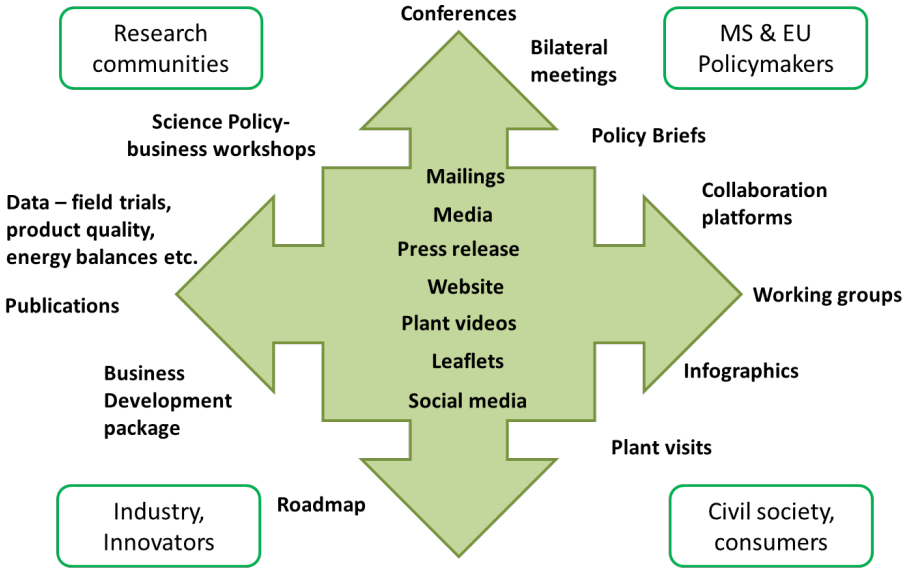
SYSTEMIC receives funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation under Grant Agreement no. 730400.

Sign off Procedures

The following external documents must have full consortium sign off:

- Any documents giving policy recommendations/ opinions to European Policy makers (letters of MEPs, Policy notes etc.).
- Any project press releases

The means of dissemination (HOW)



I. Website and Twitter

- **Website**

RISE has developed a project website. The website allows for interaction by different end users (policy/current and or potential outreach centres/ residents etc.) as well as displaying the mid-term and final reports and an event page. The content of the website will be regularly updated by RISE using input that is sent in proactively by the consortium partners.

- **Social Media**

A SYSTEMIC twitter account has been set up by RISE. All consortium members have been given the log in details and can tweet, in their own language. In addition, RISE will upload tweets for any partners who do not wish to upload the information directly themselves. All consortium partners who have twitter accounts for their own organisations/ companies, will also proactively retweet SYTEMIC tweets and write tweets about SYSTEMIC.
A LinkedIn account has been set up by WENR. WENR will share SYSTEMIC's news items and news letter's as well as any other relevant posts for partners. All posts will be in English.

II. Media

- **Press release (start and end of project)**

A project press release was written and released to the media at the start of the project. It was translated (from English) into French, Spanish, German, Dutch, Italian and Finnish. A
A press release will be drafted and sent out at the end of the project. RISE will coordinate the mailing for Brussels media and English language media to ensure there is no overlap. In addition, RISE will distribute the press release through its 8000+ contact mailing list.

- **Brussels and local, regional & National Press**

All consortium partners are encouraged to contact the local, regional or national media on a regular basis to push stories concerning SYSTEMIC through op-eds, interviews, plant visits etc. RISE will support this process with pre prepared op eds if necessary. SYSTEMIC will aim to have 10 articles by the end of the project.

RISE will work to have the final project conclusions and recommendations published, where possible, through Brussels media channels such as Euractiv, the Parliament Magazine, Agrafacts, Politico etc.

- **Dissemination Dbase and reporting**

All consortium partners must complete the two reports sent out by Wageningen every 6 months – an excel sheet on dissemination activities, and a word document on policy meetings and working group/consortium member interaction for SYSTEMIC.

III. Brochures, information sheets and videos

- **Brochure**

A project brochure has been developed and printed copies distributed amongst the consortium partners at the start of the project. All partners of the consortium are encouraged to distribute the brochure at all relevant meetings and events and consider translating the brochure where needed. The brochure outlines the key messaging of the project. Any distribution of the brochure must be noted in the dissemination report (see above).

- **Information sheets**

Five A4 factsheets will be produced to target different audiences (policy makers, farmers, consumers, civil society local to the plant and industry/ potential innovators).

- **Animation video**

RISE has developed an animation video for the project. This will be made available on the website and to all partners for communication, to explain the project and its impact.

- **Newsletter**

A tri-annual newsletter (starting from month 22). At the beginning of the year, the content of the three newsletters will be discussed by the PMT and if necessary by the partners, so that it is clear which information has to be collected or topic has to be written. The letter will be uploaded onto the website and sent to a mailing list that will be centralised at the RISE Foundation. The consortium partners will redouble their efforts in 2019 to increase the subscription to the newsletter by including the link in their own newsletters, in their presentations etc.

- **Plant Videos**

Each plant will organise the development of an onsite video of their plant, once the full nutrient recovery technology is installed/ the plant is built. Once done, RISE will create a plant video for the

SYSTEMIC project (estimated for end of 2019). This will be uploaded on the website and used at presentations etc.

IV. Plant visits

Each plant (as of year two) shall organise two local visits over the course of the project whereby local residents, schools, associations and policy makers are able to take a tour of the plant and learn more about how it works and the positive impact that such plants will have on the environment, circular economy etc. in the future. The plant visits will be advertised both locally and on the website. To ensure the greatest possible take up of these visits, all partners will carry out a scanning of related events in the area (such as EU policy events, farm open days etc.) to try and combine the visit with another event. In addition, the plant open day in AM Power will also be advertised widely in Brussels to try and encourage policy makers, NGOs and industry representatives to attend much as is done for open farm days.

Prior to the plant visits, the plant should ensure that the plant information sheets (developed by the EBA) are translated into the local language and made available to the visitors. In addition, plants will be able to use the SYSTEMIC infographic and animation video during the visits.

At the end of each visit, the plants will ask participants to fill in a short questionnaire to evaluate the impact of the visit to better identify who is attending and the efficacy of the messaging given during the visit. RISE will send a template for the questionnaire.

V. The Promotion of a Science-Business-Policy Dialogue

- **Involvement in relevant European working groups**

Partners of the consortium will be involved in the following groups and strive to become members of any other groups deemed relevant.

- EIP AGRI Focus Group 19 – Nutrient Recycling – Ghent

- EIP Water - RISE

- TWG STRUBIAS – Wageningen UR, EBA and Ghent

- European Fertiliser Working Group at DG Enterprise –Fertilizer Europe, EBA and ESPP (members) and Wageningen UR (observer).

- **Collaboration national and European platforms**

To disseminate information on the project and engage in discussion through existing networks such as BioRefine clusters, WSSTP[9], EBA network[10], ESPP, IWA Resource Recovery Cluster[11] and similar organisations at the MS and EU level.

- **Consultation workshops**

One workshop on *Fertilising products based on animal manure under the Nitrates Directive and Circular Economy* was held in May 2018, focusing on policy makers and researchers. A second workshop (organised in the within the ESPP/Biorefine cluster and WSSTP/SPIRE) will be held in M36 orientated towards specific regulation or set of regulatory bottlenecks identified in WP 1-3. Invites to be sent to relevant academics, policy makers, MS representatives, NGOs etc.

[9] Water Supply and Sanitation Technology Platform
[10] European Biogas Association
[11] Resource Recovery from Water Cluster

- **Meetings**

This should include relevant policy makers (Commission, European Parliament, MS and regional authorities), relevant academics, NGOs (environmental, rural, those dealing with waste such as SUSTAIN, consumer organisations), MS representatives etc. The main contact for each will be identified. The purpose is twofold, policy change and awareness raising and acceptance. RISE will track the main meetings with policy makers through the internal reporting procedure.

- **Workshops & Conferences**

Where possible, partners will use their networks to identify relevant conferences and push to have speakers from the SYSTEMIC consortium at those events

- **Policy briefs**

Two policy briefs to be written in a style that is accessible to policy makers, providing them with clear, concrete policy recommendations. These will be disseminated through bilateral meetings, the clusters and working groups, conferences, the website, social media and newsletter. The policy work will be supported by a SYSTEMIC Policy Working Group which will meet in person or by skype) twice per year.

- **Synthesis document**

To identify by the end of year one of the project the report structure and what information needs to be fed back to RISE and in what form to ensure its timely development.

- **Peer reviewed journal articles**

SYSTEMIC will write and submit at least three articles for peer review to be published in relevant academic journals. All journal articles published for SYSTEMIC will be open access.

Tracking of Dissemination

RISE will keep track of all dissemination results including the following which will be integrated into the internal reporting templates. All partners will be asked to keep track of this information to input it into the reporting templates:

- Articles in the media, interviews etc. (online and offline)
- Speakers and panellists at conferences
- Articles in journals
- Meetings
- Involvement in collaboration platforms and working groups
- Distribution of brochures etc.

Annex 1: Priorities and activities for 2019

The dissemination and communication priorities for the above period will be as follows:

Deliverable 4.4: Dissemination materials (M24 – May 2019)

- **Newsletter** Mar 19, June 19, Oct 19
- The completion of the following **information sheets**:
    - Policy makers – Feb 18 (update Sept 19)
    - Infographic – Feb 19
    - Residents around the plant – EBA Feb 19
    - Farmers – UGent – Nov 2019
- **Animation video** complete – Feb 19

Deliverable 4.5: Dissemination material (M36 – May 2020)

- **Newsletter** June 19, Oct 19
- The completion of the following **information sheets**:
    - Policy makers –update Sept 19
    - Farmers – UGent – Nov 2019

  Plant video's – Dec 2019

Task 4.1: Ensure continuous knowledge exchange of transfer

- **Plants visits** – at least 1 per demonstration plant per year – from June 19 onwards
- **Update the Dissemination and Communication plan (M28 – October 2019)**

By October 2019, all the plants should be fully functional except for RIKA's plant which will become operational by the end of 2019. Therefore, SYSTEMIC will increase the visibility of the deliverables of WP1,2 and 3 as results start to accumulate.

RISE will encourage consortium members to be more proactive in sending through news items, tweets, articles and topics for the newsletter to support the greater visibility of the project as well as pushing for greater sign up to the SYSTEMIC newsletter.

Target groups

- Policy makers

SYSTEMIC has been very active and visible communicating regarding the project the policy needs to policy makers during 2017/18. This will continue in 2019 with the ongoing policy work and policy events. Policy work will include: the updating of the Nitrates Directive and the New Fertilisers Regulation.

- Innovators and Industry

VCM is very strong in disseminating information to potential adoptors through the outreach project and the strong presence of consortium members at industry events will continue the dissemination of the project to industry and other potential adoptors.

When results start coming out on the products being developed from the plants, SYSTEMIC will be able to target more dissemination activities at the end users of the products, especially farmers, processors and retailers. Once enough information is produced, RISE will work with partners to identify the best measures to do this.

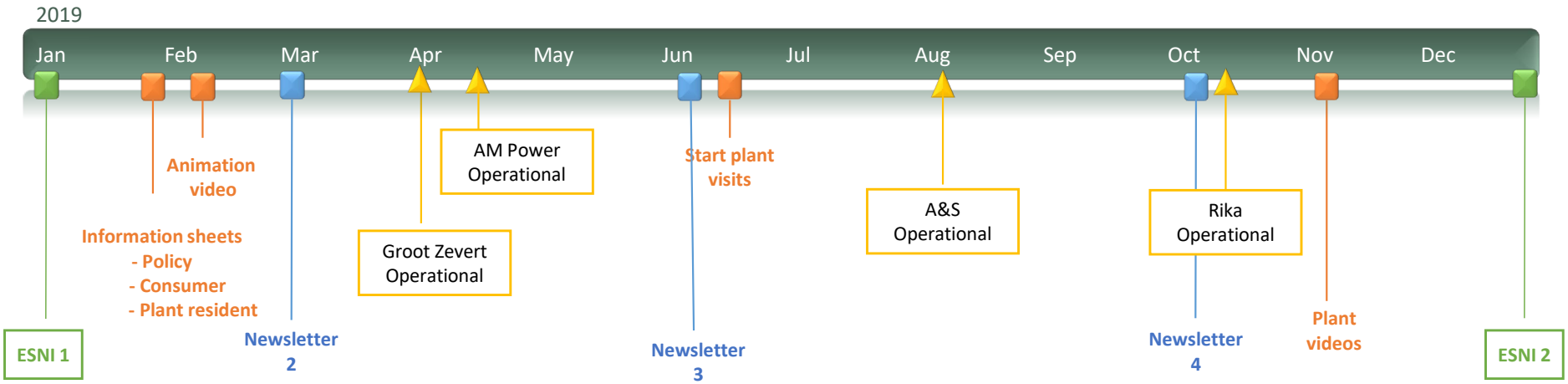
- Public

Plant visits to target the public (to start from June 2019)

- Research Communities

SYSTEMIC already has a strong interaction in the research community on those working on nutrient recovery projects, not least through the shared events, the CDB and Biorefine cluster. This will continue in 2019

Annex 2: Timeline 2019



* This timeline was drafted in early 2019. A topical overview of the status of the demoplants is available in D1.19.

Horizon 2020

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