SCAPE
POWERING E-MOBILITY

D8.1 – Dissemination and Exploitation Strategy (DES)

SWITCHING-CELL-ARRAY-BASED POWER ELECTRONICS CONVERSION FOR FUTURE ELECTRIC VEHICLES

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Dissemination level: Public
Work package: WP8
Description: Outline of SCAPE's communication, dissemination and exploitation strategy, including the project's visual identity, communication tools, scientific dissemination plan and exploitation pathways.

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Executive summary

This Dissemination and Exploitation Strategy (DES) document details **SCAPE's Communication, Dissemination and Exploitation approach**, including an account of its implementation through an activity plan. The DES also outlines an integrated **IP ownership evaluation** and features an **exploitation strategy** aimed at identifying needs and opportunities for in-project and post-projects activities to maximise the impact and transfer of **project-generated innovation and outputs**.
The document will cover in detail **WHAT** is being communicated, disseminated, and exploited (project assets), **WHO** are the desired receivers (target groups) and **HOW** each activity/measure is carried out (tools, channels, procedures, strategies, etc.).
The overall goal behind the communication, dissemination and exploitation strategy is to create an **accessible, comprehensible and long-lasting echo for the project**, able to carry any exploitable results to (and well beyond) EV and power electronics market players, and within the larger EV community.
Key objectives and actions of SCAPE's DES include:

- **promote the SCAPE project widely and effectively** within Europe and internationally through a communication/dissemination plan involving all partners,
- develop and feed an attractive project **website**, lively **social media** profiles and **stakeholder-specific channels**,
- identify **project stakeholders** and **primary target groups**,
- share project results at **conferences** and in targeted **scientific publications**, among public **media** and stakeholder-related media,
- **monitor the efficacy and impact** of communication and dissemination activities and identify strategic moves to **improve engagement**,
- **outline business strategies** identifying potential commercial opportunities for exploitation of project outputs,
- provide framework and support to partners involved in the **iterative patenting process and IPR Management** during the project (as addressed in detail in the Consortium Agreement),
- ensure that any knowledge, guidelines, recommendations, toolkits and insights generated from the project are **fully transferred to relevant stakeholders**.

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Document History

The DES will be annually updated for the duration of the project and will perform as a living document to reflect the periodic assessment review of the activities performed. The strategy will be regularly updated (with annual status analysis) to adjust to any changing outreach needs and requirements of the project and provide support to the project's tool development, collaboration network building, patenting issues and pathways to market.

Date	Person	Action	Status
23 September 2022	Valentina Malcotti (ISINNOVA)	First version	Draft (V1.0)
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30 September 2022	Valentina Malcotti (ISINNOVA)	Final version	Final (V2.0)

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List of abbreviations

AB	Advisory Board
DES	Dissemination and Exploitation Strategy
EB	Executive Board
EC	European Commission
EIB	Exploitation and Innovation Board
EV	Electric Vehicle
GA	General Assembly
IPR	Intellectual Property Rights
OA	Open Access
OEM	Original Equipment Manufacturer
PC	Project Coordinator
PCB	Printed Circuit Board
WP	Work Packages

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About SCAPE

Powering e-mobility

Towards the standardization, cost reduction, and increased performance of power electronics for next generation electric vehicles

As a promising player in **e-powering sustainable mobility** and **promoting zero-emission transport**, SCAPE brings together **nine expert and inspired partners** for a 4-year leap in power electronics application to e-mobility. The ambitious project sets out to **revolutionise the design and implementation of power converters for electric vehicles**. Moving away from traditional approaches in powering e-mobility, SCAPE aims to build and validate a novel, standardisable, and modular design and architecture for the EVs' powertrain, coupled with an integration of advanced control systems.

SCAPE's challenge

In power electronics, the traditional design approach of power converters involves a range of power semiconductor devices with different ratings, optimized to operate at different conditions and with several requirements for ancillary circuitry and power circuit topologies. This dispersion in power devices and circuits leads to significant engineering efforts to ensure production and, thus, little resources left to improve performance at this level. In the electric vehicle (EV) market, this void translates into EV OEMs investing billions of euros to develop their own e-powering solutions to **counter the lack of standardization on the EV power conversion system designs** across the different models and types of vehicles available.

SCAPE's solutions

SCAPE sets out to address this structural inability to take full advantage of scale economies to reduce costs by **developing a cost-efficient production chain in power converter development** for next generation electric vehicles.
SCAPE's 3 in 1 multilevel approach involves:

- a new, standardisable, modular design for EV power converters,
- a highly compact and integrated building-block implementation architecture for EV power converters,
- intelligent modulations and control strategies with online diagnosis and digital twin for predictive maintenance combined with machine learning.

SCAPE's impact

A successful implementation of SCAPE's e-powering 'solutions' for the EV market will enable reducing costs for powertrain elements thanks to **scale economies**, while also improving its performance features (reliability, efficiency, power density, etc.), and enabling enhanced functionalities through advanced power-electronics integration techniques and advanced controls.

A win-win scenario starring:

Empowered OEMs – with access to a cost-efficient and quality-improved power converter production chain;

Happy Drivers - benefitting from more affordable and better performing zero-emission vehicles;

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Cleaner Planet* – a greater penetration of the sustainable EV market and an accelerated up-take and acceptance of e-mobility will lead to reduced green-house gasses emission.

**An environmental impact assessment of the SCAPE process will be performed in a specific task within WP8.*

…and a ***Competitive European e-mobility market*** - pursuing independence, industry leadership and reputation in EV components' systems and emerging technologies.

Models, simulations, digital twins and prototypes will help SCAPE's team validate its approach and share project assets with the power electronics community, the EV components' industry and all climate-sensible long haul transport companies and vehicle drivers out there!

SCAPE will put substantial efforts in generating impact though a well-structured approach to communication, dissemination and exploitation to **make sure any potential innovation, knowledge and tech transfer reaches all actors and market players involved** in increasing the **automotive value chain** in the crucial field of **electromobility**.

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1. Communication strategy

1.1. Telling SCAPE's story

The first step to develop and shape SCAPE's communication, dissemination and exploitation strategy involves the design of the project's **visual identity**, the development of a multi-purpose **communication toolkit**, including **promotional materials,** and the drafting of **engagement strategie**s for digital and social media channels.

A large part of setting the stage for an effective in and out project communication will be finding the **leading narratives** for the project. This will be done together with the technical partners who can provide the framework and contents to help tell the compelling story of SCAPE's innovative approach to power converter design and implementation.

A shared and on-going process of pooling ideas, capacities and resources between the nine diverse partners will allow to better ground the **project's storytelling** and help build and manage relations with stakeholders involved.

In summary, strategic communication objectives include:

- identify the project's main narratives for **effective project storytelling** based on SCAPE's activities and target groups,
- select the most **impactful social media tools** for the project's needs, ensuring high visibility to the project,
- select and cultivate **specialized media relations** to engage with project outputs.

1.2. Reach in, Reach out

Smooth and quick communication within the project itself and among its partners is a must have to set up a **coherent and powerful reach to the outside** and disseminate project results to enroute project innovations. This is especially true in a multi-level project such as SCAPE, in which the silo effect is looming. **Partners are encouraged to share regular updates** on their tasks and take part in brainstorming sessions to select the best ways to promote project milestone results. This includes providing regular input to feed the project website (section 3.1.), the project eNewsletter (section 3.4.) and social media channels (section 3.2.). The same is true for scientific publications, articles, presentations and project-relevant conferences: all partners are invited to share this kind of information to **ensure maximum visibility to project results**. Partners are also invited to actively share SCAPE's project journey via their own official digital and social media channels using the project's branded communication materials to multiply presence within the project's field of action.

1.3. SCAPE's shared folder

To facilitate this content animation and make sure all partners have easy access to updated promotional materials, logos, templates and relevant visuals, all communication materials will be stored on the **project shared folder on Sharepoint,** which will act as the project's living storage. Partners have already been given access to the folder and all have the possibility to edit folders and contents, unless specifically stated. If a new 'colleague' requires access, a request can be made via e-mail to glacube@irect.cat and PC afilba@irec.cat (in *cc*) including the contact's full name and e-mail address.

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2. SCAPE's Visual Identity

With the broad term visual identity, we refer to the **'look' and 'branding'** of the project which is determined by the combination of several elements including logo, specific typographical and chromatic choices, project claim/payoff and tone of voice. Having a **memorable image**, as well as a clear message, is essential to ensure target groups easily recall the project and its products and can place SCAPE in its ecosystem.

Overall, the project's tone of voice, meaning the brand's personality projection, choice of wording and emotional appeal, will have a **professional, innovation-driven and market-geared** feel. SCAPE's communication style will also keep an eye on **embracing the climate crisis** and taking on board also well-informed, non-technical audiences. When required, communication will avoid the overly specialized shades of the SCAPE endeavour, which don't necessarily have to reach all stakeholders, and focus on innovation and potential applications of project approaches and results.

SCAPE's visual identity study will ensure a consistent, professional, innovative, attractive and friendly interface of the project's communication channels and outputs, including presentations and deliverables for which specific templates will be designed.

Partners are asked to always use the appropriate visual identity items and templates and **comply with the visual identity guidelines** (section 2.2) when involved in project-related dissemination activities and announcements.

All visual identity items (logo, brand guidelines and templates) will be uploaded into the specific section of the project shared folder where all partners will be able to download them.

2.1. The SCAPE project logo

The first brushstroke in designing SCAPE's look is the **project logo**.

The chosen logo is the result of an animated **group brainstorming involving all partners**. Offline and online sessions were dedicated to collecting insights concerning the logo's concept in terms of appearance, themes and messages. Shared ideas were then blended with aspects of graphic design tied to shapes, colors, proportions, readability and other technical requirements. A short-list of three logo options was presented and voted online.

Figure 1 - The SCAPE logo (Source: ISINNOVA)

The winning logo (Figure 1) was then graphically optimised and made available in multiple formats (.png and .pdf), versions (with/without payoff claim) and chromatic options (full color and grayscale) on the shared project folder.

Where power electronics meets EV innovation

The logo has several conceptual dimensions to it, reflecting both the **world of power electronics**, in the use of circuit-like elements, and the **final EV market** in which SCAPE's potential impact is expected. The 'next generation' aspect and SCAPE's future looking gaze also shine through in the portal-like image symbolizing the entrance into a **new gateway to automotive innovation**. The

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visual reference to **multiple vehicles** also underlines how SCAPE's reach goes beyond cars to include long haul trucks and two-wheel vehicles.
Elements are combined to create a unique look for SCAPE that moves away from the traditional plug image to embrace the future **potential of e-mobility** and the **dialogue needed with the power electronics community**.
Chromatic choices point to **power/energy (orange)**, **knowledgeable inspiration (light blue)** and sustainability of **e-mobility (green)**. The 'green' aspect is an important part of the project which includes a specific task on the assessment of environmental impact.

A small tribute in the design of vehicles goes to the 2Zero (**Towards zero emission road transport**) logo, the co-programmed Partnership funded under the **Horizon Europe** programme aiming at accelerating the transition towards zero tailpipe emission road mobility across Europe. This modest reference helps "brand" SCAPE in **the zero-emission transport mission** and gives a sense of **consistency with other significant EU-funded initiatives** in the field.
A **strong payoff/claim** was chosen to empower the logo even further and define the project's ultimate action plan: *Powering e-mobility*. Depending on the purpose, the logo can be used both with or without the payoff claim.

2.2. Visual identity guidelines

The visual identity guidelines below detail **how the logo should be used**, the project's **fonts**, the **colour** scheme and the **templates** provided. These visual identity guidelines will be adhered to in all communication materials, including the website. These also include indications and general rules on how to **acknowledge EU finding** of the project and outline the right and obligation to use the **EU emblem**, **funding statements and disclaimers** in connection to the project.

2.2.1. Use of the SCAPE logo

Position

As a general rule, the logo must be placed on the top centre or top right corner in publications, reports, letters and presentations.

Incorrect use of the logo

- Do not change the shape and proportions of the logo
- Do not change the font typography
- Do not change the colours of the logo

2.2.2. SCAPE Colors

Below are the **SCAPE brand colors**, provided in hex code and RGB. These colours are used in the logo, in all promotional materials, in all project templates, as well as in print materials and on the website.

Primary colour: 1C75BC - Dark Blue (R:28 G:117 B:188) (C:84% M:47%, Y:0%, K:0%)

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Secondary colour: F3931F – Carrot Orange (R:243 G:147 B:31) (C:0% M:50%, Y:92%, K:0%)

Tertiary colour: 295431 - Dark green (R:41 G:84 B:49) (C:83% M:41%, Y:87%, K:42%)

Other Colours (for typography variants):

Dark grey: 5A5A5A - (R:90 G:90 B:90) (C:59% M:49%, Y:47%, K:40%)

2.2.3. SCAPE Typography

Primary Typeface

Poppins and **Poppins Light** are the primary typefaces that should be used in all typeset communications, such as deliverables, leaflets and reports. These should also be used for all printed communications (letters, forms, etc.). These fonts are consistent with the logo and were chosen for their clean lines and ease of readability.

- Title: Poppins, font size 14, bold
- Subtitle: Poppins, font size 12, regular
- Heading 1: Poppins, font size 14, bold
- Heading 1.1: Poppins, font size 12, regular
- Heading 1.1.1: Poppins, font size 10, regular
- Heading 1.1.1.1: Poppins, font size 10, regular
- Heading 1.1.1.1.1: Poppins, font size 10, regular
- Body paragraph: Poppins Light, font size 10, regular
- Table heading: Poppins, font size 10, bold
- Table text: Poppins Light, font size 10 or 8, regular
- Captions : Poppins, font size 8, regular

Website

Our website, **currently under construction**, will use the Poppins and Poppins Light fonts, or their equivalents.

Templates

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A combination of Poppins and Poppins Light is used on Word and Deliverable templates. Poppins Light is used as the font in PowerPoint presentations. Poppins Light is preinstalled on both PCs and Mac computers. All fonts will be made available for download in the project's shared folder so partners can install them on their devices.

2.2.4. Templates

All official project documents, including presentations, must adhere to the project's distinctive visual identity. Partners are asked to **use the templates developed for SCAPE in different formats**. The templates define various elements, such as design, font type, size and color, headlines, captions styles, tables, bullet-points, etc.
The following templates will be developed and made available for download on the project's shared folder:

- **PowerPoint presentation template** – to be used for presentations at project meetings and for official presentations on behalf of SCAPE (e.g., during conferences or other public events);
- **Deliverable/Output template** – to be used for official project reports, outputs and deliverables;
- **Word template** – a flexible layout for project reporting activities (e.g., minutes, etc.), letters, etc.;
- **Canva slide template** – a couple of slide templates will be provided to partners for them to personalise visuals (using the free online graphic design tool, Canva) and upload them on their website, social media channels.

Other templates and specifications may be developed over the course of the project, if needed. Any additional materials produced will be detailed in the DES periodic updates.

2.2.5. Acknowledgement of EU-funding

As an EU-funded project, **full acknowledgment of funding must appear on all project materials and outbound communication.**
Unless the Agency requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must:

(a) **display the EU emblem* ('flag')** - this is the single most important visual brand used to acknowledge the origin and ensure the visibility of EU funding. When displayed together with another logo, the EU emblem banner must have **appropriate prominence**.
For the purposes of their obligations, beneficiaries may use the EU emblem without first obtaining approval from the Agency. This does not however transfer any right to exclusive use. Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

(b) **include the funding statement below,** which is usually incorporated in the official logos made available by the European Union*:
'Funded by the European Union'.

*The ready-to-use EU emblem, including the funding statement, can be downloaded in all EU languages, Arabic, Islandic, Norwegian, Turkish and Russian from the European Commission's official page. Detailed information about the **correct use and placement of the EU emblem and the funding statement** can be found in the Operational guidelines for recipients of EU funding.

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This information will also be provided under the *Communication and Dissemination* section of SCAPE's shared folder.

2.2.6. Disclaimer Excluding Agency Responsibility

Any dissemination of results must indicate that it **reflects only the author's view** and that the Agency is not responsible for any use that may be made of the information it contains.
In addition to the EU emblem and funding statement, the following **legal disclaimer** must be displayed on any written content produced within the project:
'Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.'
This disclaimer can be written in a small font size and can be placed in areas that are less prominent than those used for the main logo, for example at the bottom of websites or in the editorial information of publications/report/deliverables.

3. Communication Tools

SCAPE's communication toolkit involves a series of **traditional and *ad hoc* communication tools.**

3.1. Project Website (D8.6)

The SCAPE website (www.scapepower.eu) is bound to go live no later than month six (December 2022).
As one of the **primary communication streams** for both **project administration** and **outreach** to partner organizations, stakeholder groups, media and the public at large, it will convey the **project's aims and intended impacts and showcase project results** as they become available. It will also promote project events, provide information on project partners and give access to SCAPE-related materials, including scientific presentations and papers, eNewsletters, infographics, press releases and media statements. It will always contribute to feeding the project's social media accounts.

The website's main purposes are to:

- improve communication between project partners (uploading of project-related documents, working papers, events, etc.);
- inform consortium members, stakeholders and target groups of new developments, milestones and insights relevant to the project;
- showcase the SCAPE project in an effort to improve dissemination of project results to potential users, relevant industry and the growing EV community and climate-sensible public;
- provide SCAPE with a project repository/resource storage that will survive beyond the lifetime of the project.

3.1.1. Website tone and structure

The SCAPE website aims to be a **content-oriented and user-friendly hub**, with one foot in **project technicalities** and one in **scientific communication**. To meet this dual purpose, the Home Page will have a **professional but pioneering look** and a **sustainable feel** to it, with an attention to the user's experience in navigation.
Main sections will include:

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About SCAPE – Project overview, expected impact and potential innovations, including an introduction to SCAPE's approach to power converter design and implementation.
The SCAPE Circuit - Information on consortium partners, their expertise and specific role in SCAPE.
The SCAPE Powertrain – Repository of all public project deliverables (approved by European Commission) and access to any potential downloadable project outputs and technical factsheets (if shareable under IPR restrictions).
Resources – SCAPE-related scientific articles, press releases, along with referrals and inputs to further 'external' resources (useful links to other related power electronics and EV networks).
News and Events – Regular feed of project-related news such as project milestones, in-project events, partner initiatives, interesting news from the power electronics' research and EV world. Content provided by partners will be proofread by ISNNOVA and might be rewritten to adhere to scientific communication requirements.
Privacy Settings and Data Management aspects - The website will be fully compliant with the GDPR. Anonymous data will be collected (with users' consent) to measure how many users visit the site, what country they come from, what pages they visit, and how long they stay on the site. No personal data will be collected or stored on the SCAPE website. Micro copy on Disclaimers, Cookies, etc. will be available through pop-ups, in addition to indications found in the specific Privacy Policy section.
EU-funding acknowledgment - Full acknowledgement of EU-funding will be provided in the website's footer.
Contacts – Contact references to reach project coordinators will be provided, along with direct links to project social media channels and to partners' official websites.

3.1.2. Feeding the Website

Keeping the website 'alive' is a top priority! A website which is not updated is usually a big turn off… As the project's main showcase, special attention must be devoted to **regular feeding of the hub** with the project's latest news, including important milestones reached, participation at EV/power electronic/sustainable mobility events and details on any synergies built along the way.
To achieve this regular flow of contents **ALL partners are invited to share updates and progress on their project-related work and actions**. Text and contents will be revised and, if necessary, rewritten to make sure the text is informal, engaging, web-friendly and understandable also for wider (non-technical) audiences.
Regular **calls for content will be circulated by WP8 leaders** (ISINNOVA) but partners are encouraged to jump the gun and share insights when available. Accompanying **images/photos truly empower any content**. Please include visuals and provide any useful links/pdf/materials to make your proposed contribution richer.
The project website will be maintained for at least five years following the end of the project.

3.2. Social Media

Social media project accounts will be set up during the early months of the project with the paramount purpose of **engaging users** likely to be interested in SCAPE's outputs and encourage them to participate in an **online dialogue**. The expected activity on this end is to **disseminate project-related information** (in a two-way dialogue with the project website) and **encourage real-time, informal communication** on SCAPE's larger field of action (power electronics, batteries, EV vehicles, powertrains, etc.).

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A **realistic selection of social media platforms** has been carried out to make sure the chosen channels are suited for SCAPE's communication scope. It is not a case of 'the more, the merrier' and we feel it is preferable to set up a small selection of social media and **concentrate on keeping them active**. The message and audience will vary according to the type of social media used. Direct promotion of the project's social media channels will come from the website, using a dedicated plug-in, and through all promotional materials.
A couple of **project slide templates, in social media friendly formats**, will be provided to partners. Contents can be personalised using the online graphic design tool, Canva.

Follow SCAPE
Partners are encouraged to **actively follow SCAPE accounts and engage with them** by mentioning and tagging SCAPE, when relevant, from their official pages and by sharing SCAPE posts from their official (or personal) accounts in order to maximise visibility of the project.
SCAPE's social media strategy may be revised periodically to adjust the approach based on information collected from engagement metrics showing impressions and interactions with the contents produced.
Again, ALL partners are expected to chip in with proposed content and material. This includes selfies at conferences, any PCB shot that tells SCAPE's story and inspiring news and insights on SCAPE's field of action.

3.2.1. LinkedIn

Due to its **professional and academic audience**, LinkedIn is possibly the most fitting social network for SCAPE's scope. The project's LinkedIn account will focus on reaching stakeholders at large, including researchers, academic actors and market players interested in following SCAPE's orbit and project results. A well-fed management of this profile may lead to expanding SCAPE's network and **might turn online dialogues into offline exploitation-oriented ones**.
LinkedIn will also be the place to enhance existing networks, such as those around other Horizon "sister" R&I actions and open them up to reach further beyond.

3.2.2. Twitter

As one of the most **innovation-oriented social media platforms** around, Twitter can help gain visibility, especially among the media, both specialist and generalist. Also, being the kingdom of hashtags, Twitter may help stimulate debate around **project keywords and concepts** (#powerelectrnonics, #evcharging #batterytech #NEV #nocarbondtransport #ZeroEmssions, #carbon #EV, #sustainablemobility, etc.) and thus help multiply the project's reach and shape an **enthusiastic audience of followers**.

3.3. Promotional materials (D8.5)

The promotional project toolkit will involve a series of **digital and printed materials** developed to aid project dissemination.
This includes:

- a project **flyer/leaflet**,
- a **roll-up poster** to be displayed at key events/conferences,
- **document templates** (Word, PowerPoint, etc.),

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- a **PowerPoint presentation** illustrating the project's objectives and methodology, based on the contents of the project's flyer,
- **Infographics** and **fact sheets** may occasionally be developed based on the project's demands.

Relevant promotional materials will also be **downloadable from the website** and will be provided in **printed format when required**.
An **email template** has already been drafted to reach potential candidates and invite them to take part in the Advisory Board of the SCAPE project.

3.4. eNewsletters (D8.7)

Newsletters will be an important dissemination tool for the project and will be issued in an electronic format (eNewsletters). Newsletters will be developed using an **e-newsletter service** such as MailChimp and will be **sent out the SCAPE stakeholder community contacts**. The newsletter will reflect (and point to) website contents but will also **provide deep-drives and focus on specific project processes and results**, including report summaries and articles. A balanced offer of information on project activities, news and announcements, conferences and events, project-related presentations and publications will be provided.
eNeswsletters are planned to be issued to the project's contact list **at least twice a year** (and will also be made available on the website).
Regular calls for contents will be sent out and draft versions will be circulated for partners to add/approve content. For this type of activity to be successful in reaching out, a **rich database of contacts must be built early on** and powered starting from month 6, when the website will be up and running.
To this purpose, ALL partners are encouraged to **share their contact lists and invite them to sign up** for the project newsletter. A **sign-up form** will be prominently displayed on the website but other sign-up modalities will be considered (via targeted email shots to existing contacts). Newsletter engagement will be monitored via MailChimp.
A **final report collecting all newsletters (D8.7)** distributed to the project's contact list will be issued towards the end of the project.

3.5. Media relations

A **mapping of relevant stakeholder media** (digital and non) specialised in the field of power electronics and automotive EV industry will be made. A selection of sustainability-focused and climate-sensible media, both within and outside the transport sector, will be also be taken into account.
From time to time, **press releases may be issued to amplify any project breakthroughs** and **headline results**.

3.5.1. Dissemination Plan

Having set up an effective and well-liaised communication base, the project will consolidate the communication channels to start **sharing project news** (work-in-progress, events, early findings), organize specific **project dissemination events** and participate in **external strategic events** where the project's message can be disseminated and where synergies with other EU funded initiatives can be promoted. On top of **stimulating scientific-technical collaboration** and promoting the

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sharing of results, this network bonding will involve the promotion of common dissemination activities to **increase the visibility of EU funded initiatives** *tout court*.

Strategic objectives of the Dissemination Plan include:

- dissemination of project relevant information (news, events, findings, outputs) through **engagement and cultivation of media relations**;
- **mapping of project stakeholders** and identification of desired involvement;
- organization of project events, including **workshops**, a **summer school** and a **final conference**;
- participation in other **strategic 'external' events** where the project's message can be disseminated (partners will be asked to fill in and update a shared doc where they will report on their external dissemination activities such as presentations at conferences, etc.);
- promotion of active and **direct engagement of project stakeholders**, including the **scientific community** and **industry market players**, in **topic specific workshops** covering the project's main pillars;
- increasing the project's visibility and penetration by **connecting with other EU initiatives** on power electronics and Next Generation EVs (including relevant R&I projects and EU initiatives for climate-neutrality) to **generate knowledge sharing and amplification** and take **joint actions to common risks** tied to project development (for instance, electronic components shortage).

3.6. Scientific dissemination

All project partners will be actively involved in generating scientific content and maximising project impact thorough agreed communication and dissemination activities and actions. This includes a substantial contribution, in the early stages of the project, to **identifying and mapping potential project stakeholders** through a careful exploration their own scientific and technical networks.
Milestones and outputs coming from each technical work package will be involved at different stages of the dissemination process, each focused on promoting and amplifying **SCAPE's distinctive impacts** on **innovation and tech transfer**, **diagnostics and performance**, **modularity and cost-reduction**, **environmental assessment** and **future market exploitation** (see Figure 2).

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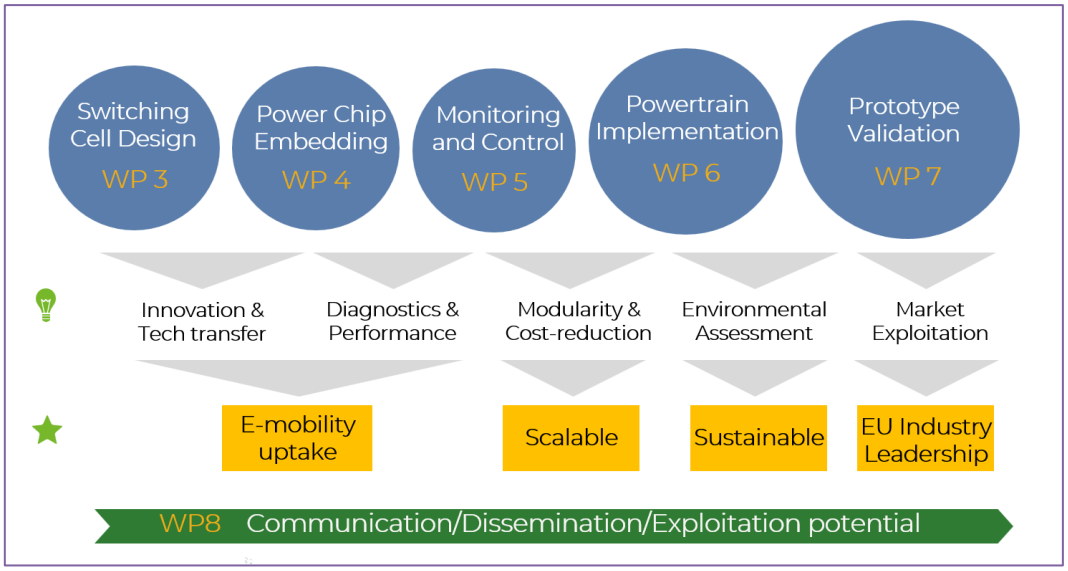

Figure 2 - SCAPE's scientific communication/dissemination and exploitation potential (Source: ISINNOVA)

3.6.1. Identifying SCAPE's target groups

Potential SCAPE project stakeholders will be actively involved in communications and dissemination activities, including their invitation to sign-up for the project's eNewsletter and to take part in project events. Moreover, clustering events with other EU funded initiatives will be held to find collaboration strategies, share results, and come upon synergies in the exploitation plans. Possible stakeholders (see Table 1) include both **technical/research audiences**, actual **industry/automotive suppliers** and final **EV vehicles drivers/users**.

Up-taking target groups	Benefited target groups
• Nextgen EV components market players • OEMs and suppliers in the EV industry (Tier 1 and Tier 2) • Automotive stakeholders • Scientific community (in the field of Power Electronics) • Relevant automotive-related associations (EARPA, EUCAR, CLEPA, AUTOSAR, ERTRAC, etc.) • Other transport sectors beyond automotive, such as vessels and aircrafts	• EV vehicle drivers • EV fleet drivers • Long distance road transport companies • Transport advisory councils • City municipalities • **Planet!**
These groups are first in line as possible **receivers of an affordable EV ecosystem with SCAPE's battery modularity, scalability and integration of advanced power electronics** and associated controls. Via SCAPE, direct impact can be generated on **industry leadership and reputation** through emerging technologies and **increased value can be brought to the automotive industry chain**. Also considering that mass production can occur on existing EU facilities, thus **accelerating market penetration**.	These groups have the chance to **access better performing (in terms of efficiency, driving range, reliability) and cheaper EVs** because of SCAPE's modular approach which enhances performance and can impact production and commercialization. This will **accelerate acceptance and up-take of EVs by the driving community** and promote a transition to e-mobility, a more sustainable and **zero-emissions transport** mode. Overall, SCAPE promotes a **powertrain with reduced emissions in all phases of production** and can be an

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	important partner in facing the climate crisis and helping cities reach **climate neutrality**.

Table 1 - SCAPE's target Groups (Source: ISINNOVA)

An initial specific mapping of possible stakeholders is provided below. The list will be updated during the project's lifetime asking for ALL partners' direct input.
Drawing on the **consortium's preliminary selection**, the following actors have been identified:

- European Partnership *Towards zero emission road transport* (2Zero)
- European Automotive Research Partners Association (EARPA)
- European Council for Automotive R&D (EUCAR)
- Concawe
- European Association of Automotive Suppliers (CLEPA)
- AUTomotive Open System ARchitecture (AUTOSAR)
- Association for Standardization of Automation and Measuring Systems (ASAM)
- HiPEAC
- European Road Transport Research
- Advisory Council (ERTRAC)
- CCAM Association
- Big Data Value Association (BDVA)
- European Regions Research and Innovation Network (ERRIN)
- BI-REX
- ClusTER MECH
- Business Sweden

3.6.2. Project Events, Workshops and Summer School

Specific project events will be organised at key project moments to **share and amplify project progress and support findings**.
Among these are:

- **Two topic-specific workshops** pooling a small selection of external industry experts and attended by a range of project stakeholders.
  Workshop 1 – with a potential focus on project Pillars I and III - Design of converters and advanced control.
  Workshop 2 – with a potential focus on project Pillar II -Converters' assembly techniques and state-of- the-art.
  The ideal workshop dates should be in 2025 or beginning of 2026, taking place in conjunction with the project's General Assembly meetings.

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- A **Summer School** aimed at educating professors, researchers and students on project findings (relating to WP3, WP4 and WP5) and thus contribute to a broader dissemination of the SCAPE project.

  The Summer School is planned to take place in the final phase of the project.

- A **final project conference** – the event will draw on SCAPE's headline results and provide insights on potential innovations and recommendations in the field of power converter design and implementation. The conference will be open to project stakeholders, members of the EV community and specialised media.

3.6.3. Other events

Aside from project events, **partners are encouraged to attend other key conferences in the project's field of study, present papers and chair sessions to promote SCAPE** at the European (and international) level. SCAPE will also take stands at international exhibitions and conferences.
In the early stages of the project, partners will be asked to select and agree on a number of **key events** which they believe SCAPE's participation to be beneficial in presenting SCAPE-related research. A **shared calendar** of these events will be kept, to ensure that there are no conflicts or overlaps between partners.
Before participating in external events, partners are asked to share with the WP8 leaders a **summary of their presentation** and any other relevant materials and considerations, including the expected audience attending, in order to prepare announcements and Save the Dates for the project's website/social media channels. After the event, partners are asked to send an account of their participation and of the event itself (including approximately how many people attended) and photos so that a news/article con be produced for the website/social media channels. During the events, participating partners are encouraged to post LIVE insights on their own social media channels (especially Twitter) and interact with SCAPE's profiles through tags and mentions.

3.6.4. Scientific Publications/Journal articles (D8.11)

Scientific publications are important resources to determine the project's penetration and broader impact. Before being submitted, scientific publications will be **peer reviewed and checked for absence of conflict with any intellectual property and patent rights fund under the consortium agreement**. Also, proposals will be cleared for overlaps between partners.
Following the publication of an article/paper, involved partners will **provide a link to the article** to be uploaded in the relevant 'Resources' section of the website and shared on social media.
All scientific publications stemming from the project will be made available in an **open access form**, either through an immediate procedure in open access or "hybrid" journals (via the Gold OA route) or through a repository option (via the Green OA route).
A **final report** (D8.11) will keep track of **all project-related scientific publications** published in journals and presented at conferences within the project's framework.

4. Monitoring of Communication and Dissemination Activities

Based on the type of communication/dissemination activity involved, **different monitoring tools will be used to assess the success/effectiveness** of the initiative. Along with the more quantitative measurements listed below, other qualitative aspects will be taken into account to evaluate SCAPE's performance on the whole. Especially in terms of the **generation of a dialogue between the different target groups and stakeholders**, including any **inspired shared**

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approach/collaboration or initiative which may spur out of it. Although it is challenging to quantify, SCAPE is determined not to lose sight of the bigger picture and the long-term projection of the impact that awareness of zero-emission transport choices can have for our cities and planet.

4.1. Impact and targets

4.1.1. Website KPIs

Google Analytics will be used to measure traffic to the website, including new/returning visitors, track activity, behaviour and engagement, including time spent on pages and identifying drivers of traffic to the site (e.g. how/why the website was reached).

- 250 visits/month of unique visitors to the website in the project's lifetime.

4.1.2. Social Media KPIs

In-built *insight tools* available from the social media platforms selected will be used to monitor the performance on social media in terms of both **engagement and interaction**.
This ranges from keeping regular track of the **number of followers** to an **in-depth scan of the reach of certain posts** in terms of interaction with the contents, **profiles of the audience** and other useful metrics for the project's evaluation.

- over 250 social media impressions per month
- over 500 social media interactions over the project's lifetime
- 250 connections on LinkedIn
- 125 followers on Twitter

4.1.3. Scientific Dissemination KPIs

- 400 project leaflets handed out/downloaded from website
- 200 people subscribed to the project newsletter
- 20 people attending Workshop n.1
- 20 people attending Workshop n.2
- 50 people attending the final conference
- At least 15 active participations in external conferences/seminars/exhibitions
- At least 10 articles accepted for publication in peer-reviewed journals
- At least 5 mentions per year of SCAPE in relevant academic journals, think-tank papers and EU specialised media

5. Timing of Communication and Dissemination Activities

A large amount of the communication activities *per se*, such as building the project's visual identity, shaping SCAPE's communication tools and developing project promotional materials will take part in the **first six to nine months of the project (M1 -M9)**. Most deliverables relating to the Communication and Dissemination Work Package (WP8) will also be produced in the early months of the project. However, **communication activities will be ongoing throughout the project's lifetime** and will concentrate on keeping **partners updated** and **feeding the SCAPE website and social media channels** with the latest project insight and outputs.

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Scientific dissemination will take the stage starting from Year 2 and will continue for the duration of the project, with a special focus on workshops, the summer school and the final project conference. Regular dissemination activities will take place thorough the project through **in and out project events and networking activities**.
The chart in Figure 3 provides the expected timing of communication and dissemination activities:

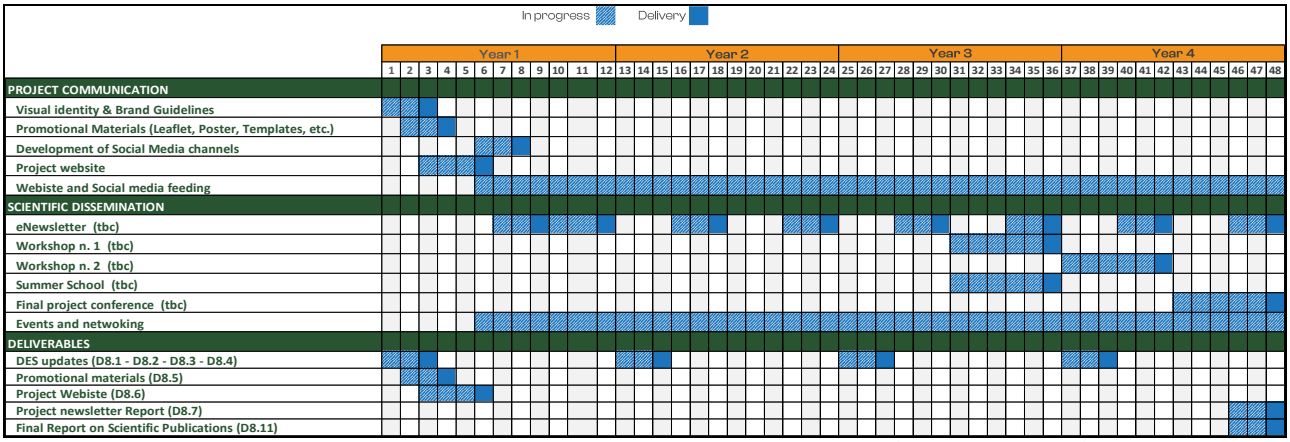

Figure 3 - Timing of communication and dissemination activities (Source: ISINNOVA)

6. Exploitation

The SCAPE consortium is motivated to make an impact with the project, as delineated in the project proposal and reinstated during the project kick-off. This will also entail exploitation beyond the project, which should be integrated with the project's developments. This chapter serves as **the baseline for SCAPE's exploitation pursuits**, presenting the framework for exploitation activities. This chapter details how, what and when exploitation and IPR interest information will be gathered from partners and reviewed, to be presented in the annual DES deliverables. Moreover, it presents a preliminary overview of how BAX intends to **provide support to partners in their exploitation strategy**.
Exploitation will depend on the type of result that is generated, as portrayed by the **European Commission's key impact pathways** (see Figure 4). According to the European Commission, there are three impact pathways: scientific, societal and economic, which were delineated as part of the Horizon Europe framework design (European Commission, 2018). Different partners in the SCAPE consortium can venture into one or more of these pathways depending on their background, strengths and wishes.
Different exploitation pathways require different types of support. This will also depend on the partners' needs and interests for exploitation. For example, whereas research partners can be supported with **ideation and collaboration** for research articles and dissemination thereof, SMEs and corporate partners can benefit more from **knowledge products** (e.g., market analyses) and **external feedback on innovative products** (e.g., customer validation, or fresh insights from consortium partners).

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Figure 4 - Key Impact Pathways (European Commission, 2018)

The main tool for shaping and reporting on exploitation plans by the SCAPE partners is the yearly DES deliverable. **Partners will be surveyed yearly on their ideas for results' exploitation, using their exploitation interest expressed in the Grant Agreement as a baseline.** The Grant Agreement (Annex 1 – Part B) includes information on 1) exploitable results and 2) primary interests of partners (see Table 2). Additionally, partners will be asked to include information on the following:

- Development status of project results
- Competing technologies and/or products
- Key partners needed to fulfil exploitation

Partner	Exploitable result	Primary interest
IREC	Methodology to obtain compact models for the Digital Twins from comprehensive multiphysics models of power converters, electrical machines and batteries.	Provide consulting services to relevant stakeholders to incorporate it into their products. Use the proposed solutions in future research projects.
CSIC	Improvement of metal plating solutions of bare-die terminals to allow packaging methods with higher levels of integration.	Provide these solutions to relevant stakeholders (mainly, EU power electronics companies). Use the proposed solutions in future research projects.
UPC	Modular and scalable architecture and design methodology for power conversion systems.	Provide consulting services to relevant stakeholders to incorporate it into their products.
UPC	Online method to assess the battery bank SoH, based on a specific operating strategy of the multilevel power converter connected to the battery bank.	License the use of the method to suppliers and other relevant end-users.
UM	Online method to assess the windings SoH based on a specific operating strategy of the multilevel power converter.	License the use of the method to suppliers and other relevant end-users.
UM	Gate driver circuit and associated switching strategy for reduced dv/dt and improved winding lifetime.	Licensed to relevant stakeholders to incorporate it into their products.
DC	Increase of the expertise in power module packaging, with a differentiating technology.	Provide the CE technology to future products of DC.

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BAX	Methodology for assessing commercial benefits of power converters.	Provide commercial services for the quantification of (cost) benefits for innovative power converters and related powertrain components to industrial partners.
AVL	Improved approaches and reduced costs in the area of power converters and concrete validation results of these newly designed e-drive elements.	After an analysis of the innovations resulting from the project is conducted, the exploitation plan will be applied considering several objectives such as: technological advancements, academic collaboration potential and business impact. To do so, 3 major approaches will be practiced: (1) making project results and their impact visible by spreading the results among stakeholders from automotive industry in order to keep technology ready to be improved more. (2) preparing academic publications and organizing events to discuss with local academic institutions and universities. (3) enhancing existing services provided for customers and increasing business potential, accordingly.
TEK	Short term: (1) on-line monitoring and control system and advanced control for EV, (2) improved integration and verification processes (battery, converter, e-axle, powertrain). Medium term: (3) more efficient, compact, and reliable powertrain based on the new power converter design approach.	TEK is an Italian medium enterprise that produces special vehicles for professional applications, and the demand for EV is increasing also in this market. The industrial growth stands on three factors: (a) the product, EV in this case, which can benefit from the on-line monitoring and control system and, in the medium term, from a better power supply system; (b) the industrial process, in which integration and verification play a key role; (c) the individual technical skills, which will grow (knowledge and experience) thanks to the participation in SCAPE.

Table 2 - Exploitation potential (Source: BAX)

For the final DES, partners will be given a more detailed format to elaborate their exploitation ideas. This will include information on year-to-year TRL progression after the project, market adoption targets, and key customers/partners. The **retention of IPR is delineated in the Grant Agreement and is used as the reference to IPR distribution** (see Table 3).

SCAPE results	IPR ownership & management	IP protection, preliminary strategy
Building blocks as highly-compact integrated SCs	CSIC and DC will mix know-how of each other to propose the best power integration solutions. The IPR of new solutions for bare-die (chips) metallization developed by CSIC will be retained for commercialisation.	Further studies to apply the developed power integration solutions to other power conversion systems and use cases will be undertaken and offered to relevant stakeholders to incorporate it into their products. A European patenting route will be initiated to protect new bare-die metallization solutions.
Modular and scalable powertrain architecture and	UPC and IREC will collaboratively work to define the novel modular and scalable architecture for the powertrain of EVs.	Further studies will be undertaken to implement the novel architecture design methodology into software solutions aimed to design the powertrain converters for a wide range of use cases. A European patenting

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design methodology		route will be initiated to protect the knowledge.
Algorithm to assess online the battery bank SoH, based on a specific operating strategy of the multilevel traction inverter	UPC and IREC will collaboratively work to define a novel algorithm to assess online the SoH of the battery bank and will retain the IPR for commercialisation.	The method will be further developed and generalized to be applied in any battery powered system and will be licensed to suppliers and other relevant end-users. In parallel, a European patenting route will be initiated to protect the knowledge.
Online method to assess the windings SoH based on a specific operating strategy of the multilevel power converter	UM will collaboratively work together with the other partners to define the novel online method to assess the SoH of the motor winding and will retain the IPR for commercialisation.	The method will be further developed and generalized to be applied in any electrical machine and will be licensed to suppliers and other relevant end-users. In parallel, a European patenting route will be initiated to protect the knowledge.
Gate driver circuit and associated switching strategy for reduced dv/dt and improved winding lifetime	UM will collaboratively work together with the other partners to define the novel gate driver circuit and associated switching strategy to reduced dv/dt and electrical stress on winding insulation system and will retain the IPR for commercialisation.	The circuit design and switching strategy will be further developed and generalized to be applied in any power electronics converter for any electrical machine and will be licensed to stakeholders and other relevant end-users. In parallel, a European patenting route will be initiated to protect the knowledge.
Physics-based digital twin model	This result lead by IREC will result from the collaboration of several partners involved in two WPs (the multiphysics simulations in WP4 will be used for the development of compact digital-twin models in WP5).	The know-how obtained from the derivation of the digital-twin models will be shared with the partners and it will be potentially developed and applied to different power conversion systems and use cases. It will be offered to relevant stakeholders to incorporate it into their products.
Improved cooling system	CSIC and DC will mix know-how of each other to propose the best thermal management solutions at power devices level. These solutions will be compatible with a unified cooling system.	Further studies to apply the developed thermal management solutions to other power conversion systems and use cases will be undertaken and consulting services will be offered to relevant stakeholders to incorporate it into their products.
OMS hardware system	TEK will develop the OMS for the SCs and it will retain the IPR for commercialisation.	The OMS will be further developed (focusing on manufacturability) and will be patented for exploitation within TEK. Licensing to suppliers and other relevant end-users will be also considered.

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Assembly of the powertrain power converters	AVL will develop the assembly of the powertrain inverter and OBC with automotive quality level and will retain the IPR for industrialization.	IPR will be kept as industry secret and used in the future for powertrain production.

Table 3 - IPR Management (Source: BAX)

6.1. Exploitation and Innovation + Advisory Board Review

After each yearly DES report, the **Exploitation and Innovation (E&I) board** (see figure 5) will be called to **review exploitation plans and provide feedback** back to the consortium. This will enable partners to subsequently revise their plans if needed. In year 4, E&I board feedback will be provided on the draft exploitation plans for subsequent improvement of exploitation plans. Moreover, if relevant, the advisory board will be asked to provide feedback on the final DES draft deliverable. BAX will investigate the best way to share confidential documents in a trusted environment according to the consortium's wishes, to not disclose sensitive information. Subsequently, partners will be asked to revise and provide their final exploitation plans. Namely, at a later project maturity, more results will be available for partners to pivot their exploitation plans. BAX will facilitate this process and report back to the full consortium with a **feedback report**. Any other partner interested in joining the feedback meetings is welcome.

6.2. Strategy facilitation activities

To **support consortium partners in strategising exploitation**, BAX will lead three parallel activities: **market monitoring, ideation support** and **knowledge support**.

6.2.1. Market Monitoring (M1 – M48)

Market monitoring is a task aimed to provide **up-to-date knowledge on the power electronics market environment, industry dynamics, research priorities and influential regulations**. Firstly, BAX aims to **share relevant online content**. BAX has a strong network in the automotive sector and is active in several automotive EU projects, which should expose relevant webinars, learning opportunities and news articles to share with the consortium. One possible way to share such content is through **tri-monthly one-pagers covering market, policy and technology**. Moreover, the roadmap to market task in WP7 will require information gathering for potential business cases of partners' results, which has crossovers to this task. Secondly, BAX will facilitate a **yearly knowledge session** close to or during General Assemblies, by the partners and for the partners, presenting a specific aspect of power electronics markets. The topic and partner can be linked to the activity or deliverable most active at that moment.

6.2.2. Ideation support (M12 – M48)

Using BAX's experience in ideation, partners will be supported in defining specific exploitable results from their initial set of exploitation plans. As delineated in the Grant Agreement, the organization of **workshops and the summer schools** are part of Work Package 8, which can partly be **used for external feedback and ideation sessions** to support the project's design choices. Since the workshops and the summer school are also intended to discuss and disseminate technical development, a business perspective adds complementary value. Based on the identified exploitation needs, **additional dedicated brainstorming sessions will be organised** at

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the General Assembly in M36 for the final DES deliverable. Wherever possible and relevant, the AB is to be invited to such ideation sessions to provide valuable insights from the industry.
We will make use of the **services offered at both regional and EU levels**, that provide guidance and knowledge in ideation and strategising. Wherever relevant we will rely on the expertise that lies in the following organizations:

- Horizon Results Booster
- European IPR helpdesk
- Advice & networking offered by members of the Enterprise Europe Network

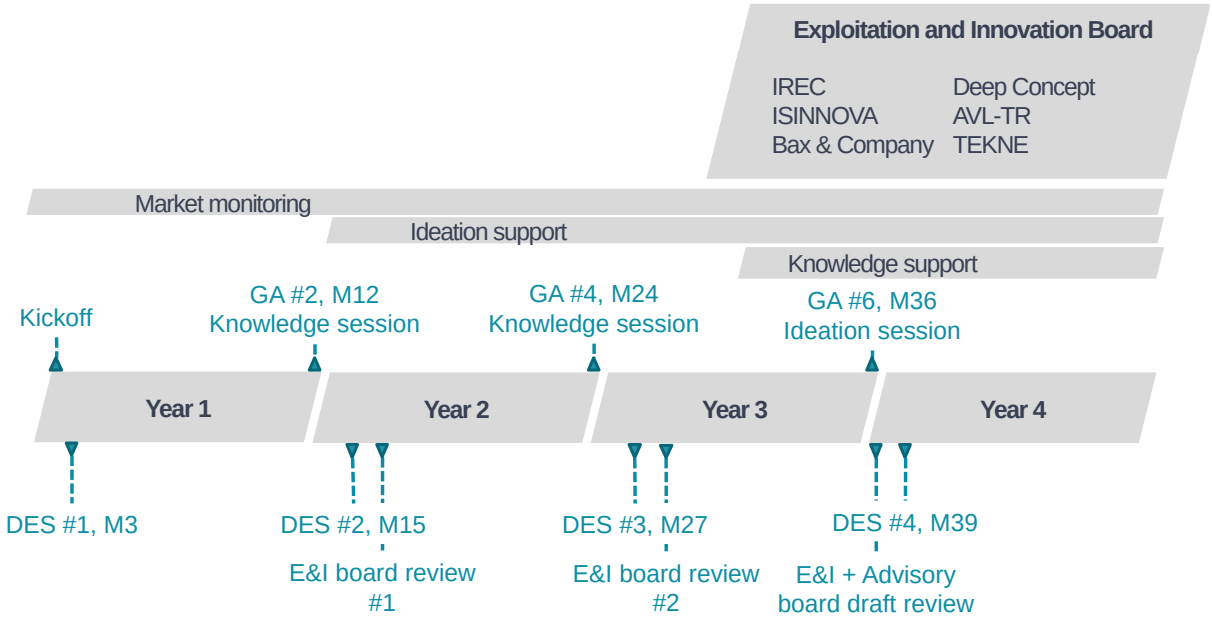

Figure 5 - Exploitation timeline (Source: BAX)

6.2.3. Knowledge support (M30 – M48)

A (non-exhaustive) sample of knowledge services BAX could perform is listed below. The selection of services provided to partners and their scope will depend on the needs identified during the ideation support phase and available person months for exploitation support in the SCAPE project.

- Market/policy readiness analysis
- Technology scouting
- Value chain analysis
- Feasibility studies
- Buyer introductions: validating partner´s value proposition and customer segment
- Pitching support

At the start of the knowledge support phase (see Figure 5) an inventory of the desired scope will be made, considering the knowledge needed for and gathered under Task 7.5: *EV power converters cost evaluation* and Task 7.6: *Roadmap to market.*

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As displayed in Figure 5, more activities aimed at exploitation will take place as the project matures, alongside the roadmap to market and cost evaluation in Work Package 7. Support by BAX will increase to help partners concretise their exploitation strategies beyond the project. The Grant Agreement will be used as baseline and exploitation activities will centre around General Assemblies, yearly DES deliverables, and the project's halfway mid-term review. Periodic meetings and other touchpoints related to exploitation throughout the project duration will ensure that partners are constantly reminded about the exploitation of their results, increasing the potential for project results to be adopted.

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