



ACCSYS

T E C H N O L O G I E S

Accsys Technologies PLC Impact Report

October 2014

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1. CEO Overview

Accsys is a chemical technology group focused on the development and commercialisation of a range of transformational technologies based upon the acetylation of solid wood and wood elements (wood chips, fibres and particles) for use as class leading, environmentally sustainable, construction materials. The primary focus is on the production, sale and licensing of Accoya[®] solid wood and the licensing of Tricoya[®] wood elements technology. Manufactured through the Company's proprietary acetylation wood modification process, these solid wood and wood element products exhibit superior dimensional stability, durability and other important benefits compared with alternative natural, treated and modified woods as well as more resource intensive man-made materials.

We believe our products offer a significant benefit when considering the global desire to reduce the negative impacts on our environment. Our products are the most environmentally friendly building solutions over their full life cycle, made from abundantly available, fast growing, sustainably sourced, renewable resources, yet with durability and dimensional stability exceeding the best performing tropical hardwoods. They are natural building materials with low maintenance and consistent qualities of the highest performing non-sustainable man-made materials; while benefitting from all positive attributes of wood (sustainability, strength, beauty) without the downfalls (poor durability & stability).

Accoya[®]'s carbon footprint significantly outperforms most other commonly used building materials such as concrete, PVC, MDF and plywood as well as a range of tropical hardwoods such as azobe and red meranti. Through the photosynthesis process trees absorb CO₂ and as a result 1m³ of wood may store over 1 ton of CO₂ for its lifetime. Our process takes fast growing, sustainably sourced wood and converts into a long last construction material, which can be incinerated for energy production at the end of its life. This has enabled us to demonstrate that Accoya[®] is carbon negative over its extended life cycle.

a) Impact delivered and changes since last report

Since our last Impact Report, Accsys remains committed to creating social value through our operations, and to improving our disclosure of this in our annual Impact Report. Since our last report:

- We increased our revenue by 78% for the financial year ended 31 March 2014, a key indicator of the recognition of the acceptance of our products in the market place. This increase also enables us to report that up to 124 M kg CO₂ have been avoided.

- Increased awareness and market acceptance for Accoya® through further enhancement of global distribution network; 19 new Accoya® distribution and agency agreements signed in the period, bringing the total to 61 in July 2014 (2013: 42); extensive coverage in place across Europe, the Americas and Asia-Pacific.
- Significant licensing progress achieved:
 - Accoya® licence agreement with Solvay became fully effective in December 2013;
 - Freiburg confirmed as location of their first Accoya® plant, expected to be operational in first half of 2016;
 - Entered binding term sheet for a global cooperation agreement;
 - Full agreements and approval of the plant construction are expected to be approved by December 2014;
 - TTL, Accsys' 50:50 joint venture with INEOS, entered licence agreement with Medite in July 2013; formal Medite Board approval expected later this financial year;
 - In July 2014, licence option agreement, covering the majority of Latin America, between TTL and Masisa was extended and Masisa Tricoya® Super MDF launched.

b) Impact management

A focus on corporate and social responsibility lies at the very core of our business. Our technologies not only enable us to manufacture wood products that offer 'best in class' durability, dimensional stability and a wide spectrum of other performance and environmental advantages over alternative environmentally threatened or compromised products, but also provide attractive opportunities for our employees, distributors, licensees and other stakeholders. We want to ensure that our business is not only a commercial success, but also run in a responsible fashion as we continue to advance technologies for a better world.

Through our research and development group we are continually looking for ways to develop our technologies and products to make them more energy efficient and to reduce as far as possible any adverse impact on the environment.

These activities remain the responsibility of the Accsys board and the senior management team. The company employs an environmental consultant to assist and advise on with a range of environmental matters and including measurements.

c) Opportunities and risks

We believe the potential market for Accoya® and Tricoya® is in excess of 2.5 million m³ annually. To put this into perspective, during the year to 31 March 2014 we sold 25,391m³, however the total global solid wood market is understood to exceed 400 million m³ annually. The global wood based panel sector is approximately 290 million m³ annually.

Consistent with most growth companies, Accsys faces a number of opportunities and risks; further details of which are set out in our Annual Report.

2. Social Purpose and context

a) Our aim

Accsys aims to reduce the use of environmentally unfriendly building materials and products by the utilisation of our propriety technology and the introduction of our products throughout the world.

The planet continues to consume endangered materials like tropical hardwood and non-renewable, high emitting building materials such as plastics, concrete and metals at an alarming rate. Our products offer alternative, sustainable new materials that resolve many of the limitations that wood and these other materials have.

Accsys has already developed and is commercially producing Accoya[®], solid acetylated wood. We have developed the process for the production of Tricoya, acetylated wood elements used for the production of panel products such as MDF. We are committed to increase the use of these products globally through sales from our manufacturing facility, and on a substantially larger scale by licensing our technologies to other companies so that they too can manufacture these products.

We are also committed to continuing research and development concerning our products (uses and new wood species) and of our processes. This on-going development is designed to increase the use, applicability and improve the efficiency and environmental benefits which in turn will benefit many of our stakeholders.

b) Context – the issue

An increasing global population and consumption has resulted in our planet being overexploited with a depletion of resources, mass deforestation of tropical forests, waste problems, toxic emissions and global warming. Therefore it seems unimaginable to remain consuming endangered materials like tropical hardwood and non-renewable, high emitting building materials such as plastics, concrete and metals at an alarming rate.

Our current consumption pattern shows an addiction to non-renewable materials and resources while deforestation of tropical rainforests continues. The ugly landscape of degraded land through mining and deforestation also results in extra releases of greenhouse gases further enhancing the global warming problem.

Although from a resource and carbon sequestration perspective wood seems like the ideal material, there is an important reason why it has not been adopted as the main building material in modern markets: mediocre performance in use (poor durability and dimensional stability leading to short life-spans and frequent maintenance). While tropical hardwoods represent some of the best performing and most beautiful woods available, there is simply not enough to sustainably harvest anymore with depletion of tropical rainforest as a catastrophic consequence. Man-made materials based on metals, plastics and concrete, but also chemical wood preservation with toxic substances, solved some durability issues, but the environmental damage in the production and waste phase are no longer tolerable (landscape deterioration, depletion, toxic waste).

Man-made materials as well as wood treated with toxic chemicals provides serious problems in the end of life phase; whereas wood is biodegradable, these materials often end up in landfills and pollute the soil and surroundings.

Overconsumption of fossil fuels such as coal, oil, gas - causing global warming – means that reserves of fossil fuels are quickly depleting, showing the urgent need to focus on energy based on renewable sources such as sun, hydro, wind and biomass.

c) Context - our solution

Our products, Accoya® and Tricoya®, are the most environmentally friendly building solutions over their full life cycle of production¹, use and final retirement. Made from abundantly available, typically fast growing sustainably sourced, renewable resources, yet with durability and dimensional stability exceeding the best performing tropical hardwoods. They are natural building materials with low maintenance and consistent qualities of the highest performing non-sustainable man-made materials; while benefitting from all positive attributes of wood (sustainability, strength, beauty) without the downfalls (poor durability & stability), and able to take full advantage of the complete resource, including low quality and waste material in the production of Tricoya wood elements.

The environmental performance of Accoya® is thoroughly tested and published following uncompromising leading independent international methodologies. For example, carbon footprint studies show that Accoya® significantly outperforms most other building

¹ Eg. <http://www.accoya.com/wp-content/uploads/2013/01/Accoya-wood-2012-cradle-to-gate-carbon-footprint-update.pdf>
and <http://www.accoya.com/wp-content/uploads/2011/05/Life-cycle.pdf>

materials, including a wide range of sustainably sourced hardwoods; and that Accoya® window frames are now classified by the Delft University of Technology as carbon negative over their lifetime cycle².

Accsys Technologies Plc reaffirms its commitment to its purpose outlined above, which has not changed since its last Impact Report. Responsibility for oversight of the organisation's social objectives remains with the senior management team and is discharged by a number of key staff who report to the senior management team.

² <http://www.accoya.com/wp-content/uploads/2013/02/Carbon-footprint-cradle-to-grave-report-window-frame-FINAL.pdf>

3. Who benefits

The beneficiaries are split into two broad groups:

- a) the global community as a result of the overall environmental impact; and
- b) those that benefit directly from our products and involvement with Accsys.

a) The global community

Our products are an alternative to tropical hardwoods and other high impact, carbon intensive materials such as plastics, concrete and metals.

A natural solution for the problem of landscape deterioration and global warming is wood from well managed sources. The forests we appreciate for their beauty and function as natural ecological habitat, are actually an important carbon sink by filtering CO₂ out of the air and absorbing this in the biomass of the tree. Although there are many misconceptions about this issue, for the sake of climate protection, the best approach is to preserve the forest through responsible management, while harvesting as much wood as sustainable for the production of durable products such as furniture or construction products, which will act as additional carbon stores while providing the forest the opportunity to regenerate and produce new biomass. As wood is a renewable resource, this is a very effective way to absorb carbon in the forest as well as in durable products. In fact, while in the tropical regions deforestation is still continuing, in temperate regions such as in Europe and North America the net forest area has been increasing steadily for several decades. Deforestation has significant social benefits for those adjacent communities that would otherwise have suffered from such continued and unsustainable sourcing.

To produce Accoya® and Tricoya®, only abundantly available, typically fast growing wood species such as Radiata Pine are being used from certified, sustainably managed forests and plantations, including FSC (Forestry Stewardship Council), PEFC (Programme for the Endorsement of Forest Certification) and other regionally certified woods.

Furthermore, the improved durability qualities that Accsys introduces to the wood, result in a longer life material which further improves the carbon sequestration properties. Together with a number of other properties and benefits (described in more detail below and in section 4) our products clearly provide a unique way to reduce the impact of the environmental issues including deforestation of tropical forests, waste and toxic emissions and global warming.

b) Specific beneficiaries

Government – local, national and international

Governments at all levels are now looking to either promote the use of environmentally sustainable materials or are enforcing their use.

For example many local authorities around the world frequently have specific requirements for building materials to meet environmental as well as performance requirements. Our products provide a clear alternative to the materials previously used but which may no longer be acceptable. While this list of potential alternative materials is likely to grow, Accsys has been able to clearly demonstrate the benefits of our products in respect of the environment, performance and costs benefits, in particular when looking over the life-cycle of the required application.

At a higher level, national and international governing bodies are seeking to limit the environmental impact of deforestation and global warming. This is being done in a number of ways, such as the targeting of national CO₂ emissions and by targeting a reduction in tropical forest deforestation. For example the European Union recently implemented a new Timber Regulation which seeks to prohibit illegally harvested timber and timber products from being placed on the EU market which up to now has been considered to have a significant negative social and economic impact³. Our products provide a new way of enabling targets and regulations such as these of being met.

The products which Accsys has introduced to the market place increase the options available to users of building materials which help meet the various targets and objectives set by local, national and international governments, thus demonstrating that their policies are achievable.

Distributors/Accsys customers

Our products provide a number of key performance advantages over existing materials which offer our customers (i.e. distributors) a new premium product to sell onto their customer based (including manufacturers and building material

³ http://ec.europa.eu/environment/eutr2013/_static/files/facts-and-figures/eu-timber-regulation-facts-and-figures_v01_en.pdf

suppliers). Accsys has 61 distributors globally as of 31 August 2014 who are now selling Accoya. These distributors benefit in a number of ways:

- Enabling sales growth by selling a new, profitable, high performance product in tough economic climate;
- Introduction of a high performance, sustainable product into an organisations own product listing enables distributors to provide a more complete service and product offering to their own customers; and
- On-going relationship with Accsys which includes product and marketing support.

Licensees

Accsys believes one of the quickest ways to accelerate the positive impact of our products is to licence its technologies relating to the production of its products to third party companies. Such licensees are expected to build their own production facilities and then manufacture and sell the end products to customers.

Such licence agreements are a major undertaking and require a sizable investment by the licensee, however they provide significant opportunities. In return for paying Accsys licence fees and royalties, the licensee obtains rights to use Accsys' core acetylation technologies and marketing rights. These enable the licensee to produce and sell our products at margins which are expected to enable licensees to generate significant returns over the life of the licence contract. Such opportunities will appeal to a number of different companies which may be looking to add a new product offering to an existing product range, utilise industrial production capacity or simply identify new growth markets which also have the benefit of providing a sustainable story at a time when many corporate companies are being challenged to contribute more widely to society.

According to the Food and Agriculture Organization of the United Nations, State of the World's Forests 2009, the global annual production of wood products exceeds 3 billion m³; the European, North American and Asian production of sawn timber and panel products totalled 209, 215 and 164 million m³ in 2005 respectively. More specifically, the Freedonia Group states that the 2012 global demand for siding and cladding was 4.4 billion m² and for windows and doors the demand was US\$158 billion. As stated above, that a global licensing volume for Accoya[®] and Tricoya[®] wood in excess of 2.5 million m³ is potentially achievable. While it is expected to take a number of years to reach this impact, progress has already been made in starting to licence our technologies. The most significant developments are:

- Licence agreement with Solvay for the production and sale of Accoya[®] wood. The licence provides for the grant to Solvay of exclusive rights for a 15 year period to produce and sell Accoya[®] within the Council of Europe save for Belgium, Ireland,

Luxemburg, the Netherlands and the United Kingdom in return for Solvay paying Accsys licence and royalty fees. The agreement allows for the construction of multiple Accoya® production plants, with the first 63,000 m³ plant to be built in Freiburg, Germany, with operations expected to start in the first half of 2016.

- In addition, Solvay and Accsys entered a binding term sheet for a global cooperation agreement in respect of a three year non-exclusive global co-operation agreement to develop Accoya® under which Solvay will engage Accsys to carry out targeted marketing activities to develop the Accoya® market outside of Europe. Accsys has granted Solvay a non-exclusive global Accoya® licence option for defined available regions, reflecting Solvay's interest in Accoya® licensing outside of Europe, under conditions that reflect the improved acceptance of Accoya® in the market. In addition Solvay has granted Accsys the option to invest up to a substantial minority share in both the European project and in any future Accoya® production projects. This would allow Accsys to benefit from future manufacturing profits of any Accoya® manufacturing plants that Solvay may construct under licence.
- Full agreements with Solvay and approval of the plant construction are expected to be approved by December 2014.
- 50:50 joint venture with INEOS to exploit Accsys' intellectual property surrounding its proprietary Tricoya® wood elements acetylation technology and processes which is now expected to lead to the accelerated global deployment of Tricoya. The new company, Tricoya Technologies Limited ("TTL"), will develop and exploit Accsys' Tricoya technology for use within MDF, particle board and wood plastic composites in a worldwide panel products market estimated to be worth more than €60 billion annually.
- Joint Development Agreement with Medite for the production of Medite Tricoya®.
- Licence option agreement with Masisa, a leading MDF and Particle Board manufacturer in Latin America for the production and sale of Tricoya® based panels. Through this agreement, Accsys has granted an option of exclusive production and distribution rights for an initial volume of approximately 60,000 metric tonnes of Tricoya® per annum. During the term of the option agreement, Masisa will carry out an extensive evaluation of Tricoya material, including market testing, production testing and the development of end-products with the launch of Masisa Tricoya Super MDF.

Employees

Accsys employees benefit from their involvement with Accsys in a number of ways. This includes the prospect of working as part of a small team involved with growing a small and ambitious company into a successful and sustainably profitable company. In order to encourage the long term involvement and commitment of its staff, Accsys has set up an Employment Share Participation Plan which is accessible to all staff and allows for participating employees to receive an additional share on a 1 for 1 matched basis. Further benefits include discounted products for staff that have been keen to undertake their own projects incorporating Accoya. A positive culture is further promoted throughout the company and Accsys employees take great pride in the development and success of the products and company. This positive approach is extended to other important aspects such as the focus on health and safety. (Please see Section 5; Activities and Operations below for details).

Suppliers

Suppliers such as key certified timber suppliers (currently largely based in New Zealand) benefit from a new sales route and additional demand.

End users

Constructions using man made materials such as metals, plastics and concrete can cause environmental damage and fall into disrepair more quickly. Accoya wood and Tricoya based panels provide several environmental gains and cost savings due to the improved properties of Tricoya and Accoya. The following are the key benefits of Accoya which end users benefit from:

- Outstanding durability – lasts 50 years above ground and 25 years below. Class 1 durability, surpassing even teak. Virtually rot proof;
- Dimensional stability – swelling is reduced by 75% or more; doors and windows open effortlessly year round; paints and varnishes last for 3 or 4 times longer, greatly reducing maintenance costs;
- Insect barrier – indigestible to a wide range of insects including termites;
- From sustainable sources;
- Consistent quality throughout – from surface to core. No need to apply preservatives when cut or planed;
- Retained strength and hardness;

- Perfect for coating – Improved stability means coatings last 3 or 4 times longer; easier to coat, less preparation and sanding required;
- Excellent machinability – easy to machine and process – no special tools required;
- UV resistant – superior resistance to UV degradation when translucent coated; natural appearance lasts longer;
- Naturally insulating – offers improved insulation in comparison with commonly used wood species; ideal for applications where energy conservation is important;
- Naturally beautiful wood – the process does not compromise the wood’s natural beauty; and
- Non-toxic and recyclable – protects the environment from the harmful effects of common treatments; may be safely reused and recycled.

End users are able to benefit from these attributes in a many number of different ways including from improved costs over the lifetime of the product and new opportunities for product development (which in turn provides higher margin opportunities).

During the 12 months to 31 August 2014 Accsys Technologies Plc undertook the following related activities with its stakeholders:

Stakeholder Group	Activity	# of sessions	# engaged	Topics of engagement
Distributors	Accoya worldwide conference 2014	1	140	Product workshops and training
	New websites created	150		Brand awareness
Customers/End users	Europe and USA Tradeshows	20	4000	Brand awareness
Customers/Joineries	UK, USA, NL, AU: Accoya Academy	1	173	Accoya/Tricoya training
	Brochures created for customers	Approx. 20,000		
Customers/Architects	Online architectural course	3	1500	The superiority of wood over other higher impact building materials
Global Community	Scientific conference paper & presentation	2	2x25	Forest Products Society, USA: 1. Science of acetylation, 2. Acetylation termite performance
	Scientific conference paper & presentation	1	35	World Conference on Timber engineering, Canada: Accoya structural performance in wet conditions (part 2)
	Scientific conference paper & presentation	1	90	RILEM Structures Conference, Germany: Accoya structural performance in wet conditions (part 2)
	Scientific conference paper &	1	100	International Research Group on wood

	presentation			protection, USA: WW Accoya durability and termite performance
	Scientific conference paper & presentation	1	120	International Panel Products Symposium, UK: Science of acetylation related to wood panel products
	Scientific conference paper & presentation	1	70	Society of Wood Science and Technology, Slovakia: Science of acetylation
	Afternoon of technical presentation from European, US and NZ presenters to architects, manufacturers and academics	1 (1/2 day)	280	Accoya Forum, Japan: Science of acetylation, Longer term performance of coatings, ecological design with Accoya, Structural engineering with Accoya and bridge building with Accoya
Shareholders	RNS, Results release, webcasts and Roadshows	9		Update on Accsys; company progress and future plans report. Stakeholder impact report.

4. Activities and Operations

a) Production Phase

Procurement

To produce Accoya® and Tricoya, only abundantly available, typically fast growing wood species such as Radiata Pine are being used from certified, sustainably managed forests and plantations, including FSC, PEFC and other regionally certified woods. To maximise resource efficiency from the forest, logs are used to produce Accoya®, while the smaller stems and branches may be used as input material for production of Tricoya. Furthermore, waste wood from construction projects may earn a high quality second life as input material for Tricoya, thus even increasing the carbon sink effect.

Through the photosynthesis process trees absorb CO₂ and solar energy in their creation of wood, while releasing oxygen in return. Depending on the density of the wood (the denser, the more carbon is stored), 1 m³ of wood may store over 1 ton of CO₂ for its lifetime⁴.

Fast growing softwood species such as Radiata Pine are primarily used to produce Accoya[®]. The use of wood species that produce larger volumes of wood over the same time span for the same area of land offers obvious environmental advantages. Radiata Pine even outperforms giant bamboo – known to grow incredibly fast – in terms of annual yield. This means that there is an ample supply of timber from certified sources for the production of Accoya[®] wood to replace scarcely available certified tropical hardwood in demanding exterior applications.

Production

Accoya is currently produced at our manufacturing plant in Arnhem, The Netherlands.

Accoya production is based upon our patented acetylated wood technology, a process that has previously been studied by scientists around the world for more than 90 years but not previously commercially perfected. This method of improving wood has been proven to deliver such superior performance that it has long been used as the “gold standard” against which other methods are measured.

The physical properties of any material are determined by its chemical structure. Wood contains an abundance of chemical groups called “free hydroxyls”. Free hydroxyl groups adsorb and release water according to changes in the climatic conditions to which the wood is exposed. This is the main reason why wood swells and shrinks. It is also believed that the digestion of wood by enzymes initiates at the free hydroxyl sites – which is one of the principal reasons why wood is prone to decay.

Acetylation effectively changes the free hydroxyls within the wood into acetyl groups. This is done by reacting the wood with acetic anhydride, which comes from acetic acid. When the free hydroxyl group is transformed to an acetyl group, the ability of the wood to absorb water is greatly reduced, rendering the wood more dimensionally stable and, because it is no longer digestible, extremely durable.

⁴ Source – Building with wood = The active form of climate protection (2011) Centre of Life and Food Sciences WeihenstephanTechnische Universitat Munchen.

The process requires the input of acetic anhydride, and results in a valuable bi-product called acetic acid. This acid is either recycled (by conversion back into acetic anhydride) or sold into the market as it has a number of uses including in the production of a number of other chemicals widely used in industry. This therefore allows for an improved carbon footprint.

Production and product improvements and species development

Accsys has continued to invest in developing our technology in order to increase the productivity and efficiency of our plant and for the potential benefit of our licensees. This has included research, testing and implementation of process changes and the installation of new equipment which has also helped reduce maintenance, increase reliability and to reduce as far as possible any adverse impact on the environment.

Significant work has been carried out developing analytical methods and mathematical models which have further increased our knowledge of both our processes and products which have created opportunities to improve our capacity, product uniformity as well as production cycle time and energy consumption. In addition we have continued to carry out research which will lead to improved product quality.

One specific area of improvement concerns the sourcing of timber. Radiata pine, largely sourced from New Zealand, is currently used to produce Accoya wood. Although the intercontinental transport distance may be high, in many instances the annual transport emissions of acetylated radiata pine, per product lifespan, are competitive when compared with various continentally sourced timber species. This is due to the efficient low emissions transport used (sea transport), low weight, and lifespan improvement through acetylation.

Nevertheless, we are continuously engaged in comprehensive species testing with the end goal of being able to commercially acetylate the species that are most local to any of our current and potential licensees, wherever they may be in the world. That

means reducing the need for transporting raw wood and therefore reducing our carbon footprint further still⁵. As a result we have successfully introduced Accoya Alder made from certified North American and European sources.

Accsys endeavors to improve our impact on wider communities through product development. Accsys is continually looking for new ways and applications for Accoya and Tricoya. Existing applications include windows, doors, cladding, decking, and structural but there are so many more applications that would benefit from the use of these products. Accsys allocates a significant amount of resources to identifying the most relevant application that would have the biggest positive social impact and work closely with our suppliers and other business partners in this respect.

Health and Safety

Accsys Technologies is committed to maintaining a healthy and safe environment for all its group employees, licensees, business partners, customers and the communities in which we operate. The plant is subject to regular inspections, certifications and quality assurance undertaken by Accsys' staff and accredited certification bodies. Accsys has established operational procedures to minimise production safety and environmental risks. The plant complies with all requirements of all relevant local law and regulation, has an official environmental permit and meets the strict manufacturing criteria of Cradle to Cradle certification on the elusive Gold level.

Our employees and offices

Accsys strives to build real collaborative team spirit, where each employee feels valued and their individual needs are listened to. We are committed to upholding the basic principles of equality and fairness. We do our best to ensure that all of our business partners adhere to the same code.

Each of our offices promotes an environmentally friendly policy. We believe even small actions contribute to our overall goals. For example, we use either 100% recycled paper or paper produced from wood pulp harvested from sustainable forests and encourage

⁵ <http://www.accoya.com/wp-content/uploads/2013/01/Accoya-wood-2012-cradle-to-gate-carbon-footprint-update.pdf>

a policy of recycling by providing recycling bins in the office. Employees are expected to turn off any electrical devices when not in use and our offices are also fitted with energy efficient light bulbs.

We also offer employees the opportunity to buy shares in the company through an attractive employee share participation plan. Employee share options and employee ownership schemes attract and motivate staff and help align their interests with shareholders. To encourage employees to embrace the product more fully, Accsys also offers employees discounted pricing on Accoya® purchases.

Licensing

See Licensee section in 3(b).

b) Use Phase – Long life

Environmental impact

The downsides of wood – such as the poor durability, low dimensional stability and susceptibility to UV degradation are overcome by acetylation. Due to these improved properties, Accoya® wood and Tricoya® based panels provide several environmental gains during the use phase. First of all, the durability of Accoya and Tricoya is Class 1, the highest durability class possible, and both materials have several quality certifications (KOMO, RAL, BBA, WDMA, etc⁶) and are guaranteed to last at least 50 years above ground and at least 25 years in direct soil contact. This facilitates a longer lifespan which enables lower material consumption (less replacement!) over the same period compared to most other materials. This also means that Accoya and Tricoya have carbon sequestration advantages as they lock CO₂ for a longer time from the atmosphere, therefore building with Accoya and Tricoya can be perceived as “active climate protection”.

Secondly, the superior dimensional stability of Accoya and Tricoya means they require less frequent coatings and hence maintenance with the subsequent environmental benefit (and lower costs). If left uncoated, durable species degrade aesthetically

⁶ KOMO = Quality mark for the building industry in the Netherlands; RAL = German Institute for Quality Assurance and Certification; BBA = British Board of Agrément; WDMA = Window & Door Manufacturers Association.

rather than physically, showing a 'greying' of the surface. Leaving the wood uncoated is acceptable for some applications but coating is still a fundamental requirement for many applications, such as windows and doors, no matter how durable the wood, and thus coatings life is a major factor in their overall performance.

Finally, compared to other durable wood species, Accoya and Tricoya offer superior thermal insulation, which yields energy conservation advantages in applications such as window frames.

Business partners

We also want our own activities and those of our licensees, suppliers and other business partners to be socially and environmentally responsible. We are committed to a policy of minimising any negative social and environmental impact that may result from our activities and expect the same high standards from our business partners. Accordingly we are committed to identifying and working with suppliers to ensure they maintain or exceed our same high standards.

Training and certification programs

Accsys allocates a significant amount of resources to educating stakeholders. Accsys both provides and participates in a significant number of educational programs and events around the world. We use these opportunities to educate the audience of not only the product and how to use it, but also to educate the audience on the bigger environment and social issues and how products like ours could make for a better world.

Programs offered:

- *Accoya Joinery Certification Program:*

This program is offered to joinery companies that use or would like to use our Accoya® products. The Accoya® Joinery Certification Scheme adds creditability to manufacturers as it improves participants' understanding of Accoya® wood. The free of charge education process that is offered by Accsys Technologies involves a presentation with a Q&A session aimed at key production staff at the joiners' premises.

By the end of the session the joiners are fully versed in the intricacies of using Accoya® and have a greater understanding of the manufacturing process and the correct use of ancillary materials and become a trained user of Accoya. The joiners are then presented with a certificate to acknowledge the successful completion of the training. On completion of the joinery certification scheme joiners are offered free marketing support. This includes Accoya web pages for inclusion on a joiners own website, co branded leaflet designed and printed and branded benefits sheets. This can be used to promote Accoya to consumers, architects and clients.

Over the last 12 months, Accsys has carried out 73 training courses in the UK and Ireland and a further 100 in the Netherlands, USA, and France.

- *Online architectural course:*

Our architectural courses cover the superiority of wood over other higher impact building materials and then how modified wood can overcome the limitations for wood use in demanding applications. The course also shows how to save tropical hardwoods and the importance of using certified sustainable wood. The on-line versions of the course, AIA and RIBA certified, can be taken by anyone and, upon completion of the course, can be used to receive continued education points for Architects.

- *Accoya Academy:*

Accoya® has launched its Accoya Academy, an on-line learning resource providing extensive information and details about the world-leading modified wood. The training tool is free and easy to use and at the end of the short course participants will have an in-depth understanding of Accoya and the acetylation process used to produce it. The Accoya Academy has been designed to give distributors, architects and designers a better understanding of the revolutionary product and the benefits it can bring.

- *Conferences and Seminars:*

Accsys also presents to selected audiences who will influence adoption of our technology, including architects, government agencies, academics and other parties (e.g. research institutes - BRE, invited representatives of relevant agencies / ministries, e.g. ministry of transport & BRANZ in New Zealand; World Conference of Timber Engineering). We also present at conferences to wider audiences with a possible interest (e.g. at the World Methanol Conference, Spain, which addresses the broader chemicals and acetyls industries and other scientific groups). The presentations typically provide an overview of the material and how it compares to other wood and non-wood materials, including its ecological credentials; a brief review of the history of the science since the first published data (in the 1920s); examples of how the Accoya® and Tricoya® products are being used and some concepts on how the materials are being tested (down to -196°C) and how they may be used in the future (e.g. electricity pylons).

- *Student and University programs*

Accsys maintains effective links to a number of universities and will continue to build on these with 3 formal programs

- Intern student working – Over the last 4+ years, Accsys has sponsored intern students working at their Arnhem facilities. These students come from multiple universities in Europe and the USA. In the last 12 months, Accsys has supported 9 interns.
- Supporting employees through further education studies.
- Napier University Scholarship program – Accsys is very proud to support the Edinburgh Napier University scholarship program for MSC Timber Engineering, which addresses the growing appetite for more sustainable building practices. This initiative is aiming to address a long-acknowledged skills-gap in the sector.
- 15-20 half day lecture sessions are set up in the US and Europe for 2015.

Warranties

Accoya® has a 50 year warranty when used in above ground applications and 25 years when used in below ground applications. Longer life means lower material consumption and because Accoya and Tricoya have carbon sequestration advantages that lock CO₂ for a longer time from the atmosphere, they may be perceived as “active climate protection”.

Engaging local communities

We actively engage with local community projects as far as possible on a pro-bono basis. By so doing we hope to showcase the high performance of our products; draw attention to the viability of "green" products; and assist local communities in reaching their goals. An example of support includes sponsorship of "Make a wish in wood" where Accoya was used for a porch swing and door frame. The project was for a guest house for children with intellectual disabilities.

c) End of life phase

Accoya® is non-toxic and is therefore fully biodegradable. As a result, Accoya can be handled in the same manner as untreated natural wood at the end of its life. It comes as no surprise that Accoya fits perfectly in the biological cycle of the Cradle to Cradle design philosophy and has thus been awarded the Gold certification.

Following the "preferential sequence for waste management" (Dutch: "Ladder van Lansink") issued by the Dutch government in the National Waste Management Plan, for more efficient use of our limited resources available, and optimum carbon sequestration effect, Accoya and Tricoya can be re-used in applications with the same or even higher added value (up-cycling).

The design of products/projects with ease of disassembly and re-use is therefore worthy of consideration. As wood products are in essence stored solar energy, they can be used for green clean energy production (releasing only the CO₂ absorbed during growth) thus saving emissions caused by burning oil, gas or coal, including the ecosystem deterioration that use of these fossil fuels causes. The renowned German research institute Wilhelm-Klauditz-Institut (WKI) has confirmed that Accoya® wood may be incinerated for energy production in the same manner as untreated wood and that no additional toxic substances will be released upon incineration.

Accsys Technologies plc continues to operate via the activities described above and it was determined that there were no material changes to the outcomes achieved by the beneficiaries of Accsys' activities during the year.

5. Stakeholders

Stakeholders are those individuals, groups of individuals or organisations that affect and/or could be affected by an organisation's activities, products or services and associated performance.

Accsys has identified that the following groups of people are key stakeholders:

a) Distributors

Accsys' distributors are responsible for the on-ward sale of Accoya to end users. Accsys has built up a network of 61 distribution or agency agreements which now sell to over 40 countries worldwide. Under the agreements, the distributors, who typically have extensive experience selling timber, undertake to market and promote our products. In return, they receive on-going support from Accsys.

Accsys holds a worldwide Annual Accoya conference since 2011 which have proved to be an interesting and a worthwhile experience. Attended by most Accoya[®] distributors, this was a great opportunity for Accsys' key customers to share ideas and visit Accoya projects. The last conference was held planned in September 2014 in Dublin, Ireland. Further support includes the provision of marketing support and guidance as well as benefitting from the various training and certification programmes described in Section 4(b) above.

b) Licensees

Accsys has previously stated a global licensing volume for Accoya[®] and Tricoya[®] wood in excess of 2.5 million m³ is potentially achievable. The selection of potential licensees and the on-going relationship between them and Accsys therefore is a key part of the Accsys day to day operations with involvement of all levels of Accsys employees and management due to the size and complexity of the resulting agreements. See Licensee section in 3(b) above for further details.

c) End customers, suppliers and other business partners.

Accsys has and continues to develop a network of relationships with a number of individuals, companies and other organisations which have an interest in our products, technologies, processes or environmental credentials, for example research and testing bodies and coatings companies. These relationships assist Accsys with further developing the market place as well as product and process development. Communication is carried out in a number of ways including:

- A quarterly newsletter 'Round up' is issued to share any new and relevant information. Read by distributors, end users, investors and partners this is a good communication tool that encourages and has enabled Accsys and its products to generate a positive reputation in the market place;
- Up to date corporate and product websites including all news; corporate issues, brand and product information;
- Product awareness is also available by social media sites including, facebook and twitter;
- Accsys also has contact forms on all our websites where anyone can contact us with questions, feedback etc. They can also opt-in to receive marketing material from us;
- Brand and Financial PR firms – report relevant activities, progress in local newspapers, magazines and online; and
- Contact details for relevant Accsys personal and third party PR firms are included on the company websites.

d) Ineos – Joint Venture

In October 2012, Accsys entered into a 50:50 joint venture with INEOS to exploit Accsys' intellectual property surrounding its proprietary Tricoya[®] wood elements acetylation technology and processes, which is expected to lead to the accelerated global deployment of Tricoya. The company, Tricoya Technologies Limited ("TTL"), will develop and exploit Accsys' Tricoya technology for use within MDF, particle board and wood plastic composites in a worldwide panel products market estimated to be worth more than €60 billion annually.

The Tricoya technology gives engineered wood products, such as MDF, a level of durability and dimensional stability that is comparable with or superior to non-wood products, while offering all of the advantages of wood – including a high strength to weight ratio and excellent mechanical and machining properties. Significantly, Tricoya[®] enables MDF wood to be competitive with non-wood materials, opening up markets in a huge number of new applications which have hitherto been the preserve of plastics, metals, resin and cement based products.

INEOS is one of the world's biggest petrochemical companies. INEOS will contribute not only its significant market reach but also its impressive technology, licensing and intellectual property expertise. As part of the transaction, TTL has been granted rights to exploit Accsys' Tricoya[®] technology and will also benefit from a licence of any intellectual property held by INEOS that may assist the joint venture in maximising the value of the Tricoya[®] proposition. Profits generated by TTL are to be shared between Accsys and INEOS in a way that reflects each party's interest. The contribution of Accsys' Tricoya[®] intellectual property to the Joint Venture will be reflected through a disproportionate future profit share which will create significant value for Accsys.

e) Employees

Accsys has an extensive communication plan for employees, which includes monthly global sales and marketing meetings which is attended by all of the sales and marketing teams. This event is motivating and provides an overview of the current month and future plans of the business and sales territories. The meeting is led by the sales and marketing director. The exercise of the meeting is to share ideas and opportunities amongst the group and take away new information.

Regular employee meetings with the CEO and COO are set up to update the team on company progress against strategy, where an open question and answer session also takes place.

A newsletter is sent out to every employee, every 4-6 weeks to keep all up to date with developments on the business, sales and marketing results and projects. Feedback and employee engagement is encouraged. Quarterly Senior Management meetings also take place with other team updates and departmental updates occurring more regularly.

f) Board

The Board meets regularly and is responsible for strategy, performance, approval of major capital projects and the framework of internal controls. To enable the Board to discharge its duties, all Directors receive appropriate and timely information. Briefing papers are distributed to all Directors in advance of Board meetings. All Directors have access to the advice and services of the Company Secretary. The appointment and removal of the Company Secretary is a matter for the Board as a whole. In addition, procedures are in place to enable the Directors to obtain independent professional advice in the furtherance of their duties, if necessary, at the Company's expense.

In addition to scheduled meetings there is frequent contact between all the Directors in connection with the Company's business including Audit and Nomination and Remuneration committee meetings which are held as required, but as a minimum twice per annum. Additional board meetings are held during the year as may be required in connection with certain specific matters.

Directors are subject to re-election by the shareholders at Annual General Meetings. The Articles of Association provide that Directors will be subject to re-election at the first opportunity after their appointment and the Board submit to re-election at intervals of three years.

Day to day operating decisions are made by the Management board of which the Chief Executive Officer, the Chief Operating Officer and Finance Director are members.

g) Shareholders

Accsys is listed on the London Stock Exchange AIM and also NYSE Euronext Amsterdam. Communication with shareholders is given high priority. There is regular dialogue with shareholders including presentations after company's preliminary announcements of the year-end results and six monthly results. The Board uses the Annual General Meeting to communicate with investors and welcomes their participation. The Chairman aims to ensure that the Directors are available at the Annual General Meetings to answer questions.

The Accsys Annual Report and Financial Statements includes a detailed Corporate and Social Responsibility section containing much of the information included in this Impact Report. As further progress against our objectives is made, we are committed to increasing the level of disclosure surrounding our environmental and social impact.

Communication also takes place by Investor alerts – e-mails to communicate major progress made by the company that does not need to be communicated as a formal Regulatory News Story (RNS).

During the year Accsys Technologies plc reviewed its stakeholders and determined that there have been no material changes to its key stakeholder groups.

6. Evidencing Social Value

a) Evidence

Stakeholder Group	Outcome	Indicator	31 March 2013 (actual)	31 March 2014 (actual)		Comment
Global Community	Reduced greenhouse gas emissions	Emissions per m ³ Accoya produced	151	95	↓	Emissions have been calculated following the GHG Protocol
	Certifications	Eco labels	10	11	↑	Svanen Ecolabel added in 2014
Government		European Timber Regulation compliant	100%	100%	↔	Policy goals assisted through reduced carbon and sustainable forestry – see above
Distributors/ Customers	Market opportunities	Number of distributors and agents	42	61	↑	
		Sales (€m) of Accoya	16.6	29.3	↑	
Licensees	Intellectual property	Licensees				See section 3: Licensees
		Accoya products manufactured under licence (m ³)	0	0	↔	Licensee production expected to start in 2016
Employees	Staff commitment to sustainability-oriented company	% staff members participating in the Employee Share Participation Plan	22%	25%	↑	
Suppliers	Growth of new sales channel	Wood species commercialised	2	2	↔	
	Additional demand	Increase in production (% change from prior yr)	66%	63%	↓	Production volumes have increased from 2013 to 2014 but by a smaller degree than from 2012 to 2013
End users	Increased durability of items using Accoya	Replacement costs (€'000) avoided per yr	150.9	284.3	↑	Assumption that this replaces 100% tropical hardwood windows (Red Meranti)

b) Current management

The majority of the disclosures in this Impact Report are based on Accsys' experience over several years. Some of the disclosures are based on a combination of recent research with our stakeholders underpinned by third party research of outcomes experienced by similar stakeholders involved in similar activities.

Accsys aims to report on progress against these disclosures on an annual basis. Accsys collects data on the outcomes experienced by key stakeholder groups. The indicators described above are based on data obtained from internal and third party research and testing reports. Since our understanding of outcomes is based on discussions with stakeholders, we will continue to enhance and update our understanding in on-going discussions. This may result in amendments and extensions to existing data collection.

Accsys acknowledges that there are a number of alternative impact measurements that could be included in this report but, because of commercial reasons, these measurements cannot be disclosed.

c) Future Plans

Manufacturing:

1. Production of Accoya® at Arnhem plant continues to seed new markets and drive demand for Accoya® and for use as a feedstock in the production of Tricoya®
2. Continued focus on reducing cycle time to increase Arnhem capacity and profitability, and lower carbon footprint

Meeting global demand:

1. Ongoing licensing of Accoya® acetylation technology to achieve multiple licence agreements, including Solvay, to satisfy global demand for solid wood
2. Development of extended global distributor Network
3. Development of detailed engineering documents for licensees
4. Development of a model to benefit further from our expertise by assisting 3rd parties in areas including sales, marketing, product and technical development, operations and maintenance.
5. Continued close co-operation between Accsys and INEOS within the TTL joint venture, to further develop and facilitate the licensing of Tricoya®

Research and Development:

1. Continued R&D and product development activities to generate future value
2. Further development of new species, end products, coatings and additional applications to aid licencing discussions and maximise value
3. Strengthened protection of intellectual property

Brand:

1. Continued development, advancement and protection of globally established Accoya® and Tricoya® brands



Accsys Technologies PLC
Impact Report
October 2014