Emissions Reduction Plan Submission from the Clothing and Textile Sector in Aotearoa, New Zealand

Textiles are our earliest and most enduring form of technology, more ancient than bronze and as current as digital currency. Highly resource intensive, textiles are both a priority and an opportunity when it comes to reaching our climate commitments.

The clothing and textile industry is one of the largest and most impactful industries in the world, currently accounting for about 10% of global emissions. The fashion sector alone is worth approximately USD $2.5 trillion[1]. In Aotearoa, New Zealand the value chain extends from agriculture (production of textile fibres), manufacture, retail, through to recycling and waste. Delivering to market domestic and commercial clothing, interior and exterior textiles. The industry is economically and culturally important to Aotearoa, employing over 30,000 people across local manufacture and retail. Retail sales of domestic clothing alone generates over NZD $4 billion annually.

The environmental impacts of clothing and textiles in Aotearoa have, until recently, been viewed primarily through a 'waste management' lens. Those impacts linked to textile design and sourcing (occurring in the supply chain) have been excluded from the discussion, in favour of a focus on domestically-occurring activities. In addition, the local textile manufacturing industry continues to shrink, meaning that manufacturing-related impacts can seem less immediate and relevant to the discussion. While not surprising, such a narrow focus ignores the significant impacts linked to the offshore manufacture of clothing and textiles that ultimately reach our market - these impacts still occur largely 'out of sight' of the public, and typically with fewer checks and balances on environmental protection and emissions than in Aotearoa.

New Zealand's clothing and textile industry understands it needs to halve emissions by 2030. The majority of clothing, fabric and textile products that enter the New Zealand market are produced in countries such as China and India which are powered by coal. Accounting for these impacts fall into businesses Scope 3 emissions category. The industry recognises the outcomes it is seeking are not completely within its control and require deeper understanding and a co-operative approach.

Our relationship with clothing and textiles is personal and deeply complex; it is intrinsically bound to our concept of self and our social identity. Their presence in our lives is profound, covering and protecting us from within moments of our birth until we are laid to rest. They adorn our homes and our offices; they protect us from the elements and from disease. In terms of intimacy, the relationship is second to that of the food and drink that we ingest. Clothing

and textiles are important to us, and as such, efforts to engage in more sustainable manufacture, use, and end-of-life of these products is also important. New Zealand is the largest producer of waste per capita and has the lowest recycling rates in the OECD. We have a responsibility to take local action to support a more sustainable, decarbonised industry.

We are lagging well behind other countries. In Europe the understanding of the resource implications and impacts of the textiles sector has matured to the regulatory phase. The European Commission President Ursula von der Leyen has announced that she "*will propose a new circular economy action plan focusing on sustainable resource use, especially in resource intensive and high-impact sectors such as textiles and construction*"[2]. Australia's Environment Minister has added clothing and textiles to the priority list of products and materials for product stewardship. Funding Australia's Circular Threads programme through the state's Environmental Protection Agency. We are yet to see such a response in New Zealand.

The cost of inaction or delayed action negatively impacts on emission trajectories, socio-economic development and climate-driven economic damage. There is a social cost of carbon, a cumulative economic impact of global warming caused by each tonne of carbon sent out into the atmosphere. Research into combined country-level costs has found the global median of more than USD $400 (NZD $550) in social costs per tonne of CO_2[3]. Time is running out, we know we all must act now to reduce carbon emissions and pollution. To create jobs in the low carbon sector and deliver social and economic benefits through the advancement of a circular economy. There is opportunity for shared management of resources and the protection of New Zealand's reputation as a global citizen.

Taking a proactive approach over the last two years the industry has come together through the Usedfully – Textile Reuse Programme in workshops, working groups and individual interviews to co-design a low carbon future for the sector in Aotearoa. The following industry submission has been developed from stakeholder consultations and a questionnaire undertaken by Usedfully, it carries the voice of New Zealand's clothing and textile industry from across the sector, from high-end fashion brands to garment suppliers that clothe our frontline workers and provide sheets for our hospitals.

Transition pathway

We agree that the emissions reduction plan should be guided by a set of principles. And agree with the five principles proposed.

- A fair equitable and inclusive transition
- An evidence-based approach
- Environmental and social benefits beyond emissions reductions
- Upholding Te Tiriti o Waitangi
- A clear, ambitious and affordable path

To enable further private sector action to reduce emissions and help achieve a productive, sustainable and inclusive economy key barriers that could be removed to support decarbonisation are:

- Lack of research and textile knowledge within government. Clothing and textiles on a most basic level are vital for our survival, mandatory face masks being a prime example. And despite their outsized impacts: resource use, micro plastic pollution, greenhouse gas emissions from production, use and decomposition of landfilled textiles, textiles are rarely acknowledged by government. This blind spot has resulted in a siloed sector approach that does not address the real cause of some of the issues it is looking to address (eg: micro plastic pollution), nor does it recognise the opportunities the industry offers to decarbonise our economy.

- Lack of engagement with industry and limited sector knowledge has led to some ill-informed and wasteful public funding decisions. Working more closely with industry experts could help de-risk funding decisions and ensure available funding achieves outcomes that are beneficial for the industry as a whole and Aotearoa in general.

Working with our Tiriti partners

We support the Climate Change Commission recommendation that government and iwi/Māori partner on a series of national plans and strategies to decarbonise our economy.

Making an equitable transition

The Climate Change Commission recommends developing an Equitable Transitions Strategy that addresses the following objectives: partnership with iwi/Māori, proactive transition planning, strengthening the responsiveness of the education system, supporting workers in transition, and minimising unequal impacts in all new policies. We agree with the objectives for an Equitable Transitions Strategy as set out by the Climate Change Commission.

The cost of transitioning to a low-carbon future must fall on players most responsible so that policies do not regressively impact low-income communities. According to Ellen MacArthur Foundation's 'Universal Circular Economy Policy Goals'"*Continuing the current linear system is projected to lead to resource use nearly doubling from 2011 to 2060, which will further exacerbate diversity loss, global heating, pollution, poverty and uneven distribution of benefits.*"[4] There are advantages to acting more swiftly "*It is estimated that the elimination of fossil fuel subsidies would have led to a reduction in air pollution deaths by 42% in 2015, at the same time as creating global net economic welfare gains of more than USD 1.3 trillion.*"[5]

New Zealand's approach to transitioning equitably must take into account our role as a developed nation that has historically contributed more than our fair share of emissions, and account for the high-polluting industries that have profited from decades of pollution with little consequence.

The changes that industry is seeking cannot be achieved by industry alone and will require agreement from other sectors. It's incumbent on all of us working in apparel, textiles and sustainability to initiate and support deep public/private sector collaborations.

Government accountability and coordination

Current legislation does not reflect this sector's significance or impacts on the environment and society. This not only presents a lost opportunity to address the most significant contributor to waterborne microplastics pollution, it also runs the risk of failing to meet our climate obligations under the Paris Agreement.

To-date there has been little specific policy from the government, much attention and funding has focused on the issues of plastic pollution, and landfill waste emissions - both of which connect to the problems in our industry, but not in an effective way.

The focus on plastics has been on single-use plastics and the resulting pollution issues, while a significant proportion of clothing and textiles is also made of synthetic i.e. plastic materials and is known to be a major source of microplastics pollution in the marine environment.The focus on reducing landfill emissions has been on food waste diversion, while a significant proportion of clothing and textile waste to landfill is also made from organic materials. Nor does the policy approach address clothing and textiles in its own right as a major contributor to waste and climate impacts. The industry has so far failed to gain the desired acknowledgement and support from the government to implement change.

Deregulation and the free market policy approach of the 1980's and 1990's decimated New Zealand's manufacturing base hitting the textile industry particularly hard. The ability to lower emissions and extract value from waste is dependent on the processes and infrastructure available. Infrastructure NZ estimates that there is a recycling infrastructure gap in New Zealand of between $2.1 - 2.6 billion which is needed to divert waste from landfill, along with an additional $0.9 billion needed in operational funding over the next 10 years[6]. The textile industry would like to raise awareness within government that textiles are one of these valuable resources currently being lost to the economy.

According to the Productivity Commission - Low Emissions Economy report "*Even if many new low-emissions technologies that can assist New Zealand to reach its low-emissions targets come from overseas, the identification, dissemination and uptake of them by New Zealand firms can be very slow. Information and coordination failures, path dependence and returns to early adopters not commensurate to their risks, can all play a role in causing this.*"[7]

Industry is seeking a partnership with government so that all participants, from manufacturers, importers, wholesalers, distributors, retailers and citizens are equally responsible, with the weight and expense of the transition not just falling to the few most progressive organisations. It also ensures that Aotearoa moves forward collectively on an issue that affects all citizens, to deliver scale and positive impact.

Funding and financing

Government procurement that includes budgets for end-of-use of clothing and textiles would go a long way to providing the capital urgently needed to establish plant and processing capability. Enabling the diversion of used textile resources from landfill tapping into currently lost value, creating economic and social opportunity onshore in Aotearoa.

Extending existing policy to include textiles would provide industry with the confidence to co-invest in crucial regional infrastructure that would benefit not only the textile industry but also positively impact other industries due to the similarity of materials eg: polyester and the plastics industry, cotton and cellulosic industries such as the forestry industry and New Zealand's burgeoning hemp industry.

Banks over focus on the property sector and limited lending to businesses is inhibiting the advancement of business in the emerging cleantech, low emissions sector. Regulation could encourage banks to support the economy by ensuring a percentage of loans is commercial lending, and in particular, to businesses in the low emissions sector. Supporting and enabling the advancement of this sector.

Government could explore the provision of low interest or zero interest loans to businesses and organisations working in the low emissions and circular economy sector to build capability and accelerate change.

Often it is more expensive to repair an item than buy a new one, locking in the high emissions linear system. According to The Tax Working Group and the Circular Economy: Context and Challenges report. "*New Zealand has generally failed to leverage its providential advantages through green taxes and subsidies.*"[8]

So-called 'green taxes' seek to change behaviour and correct externalities but leave the linear economic structure intact. According to the Organisation for Economic Cooperation and Development (OECD), the proportion of the country's green tax yield relative to other revenues is among the lowest in the OECD and is declining.

The Tax Working Group recommended the following reforms to improve green taxes in New Zealand's tax system:

- In the short-term, review negative externalities and remove perverse concessions, such as those for extractive industries;
- In the medium-term, recycle revenues from more extensive environmental tax into environmental protection and remediation;
- In the long-term, extend the tax base to support a circular economy.

New Zealand's textile industry would like to explore with government how to align policy levers, such as subsidies and tax incentives, with the Circular Economy to enable the secondary material markets to compete with virgin materials on cost.

Research, science and innovation

New Zealand innovation is currently hamstrung by the lack of pilot scale plant, which inhibits commercialisation of products and ideas. While well served with lab scale facilities, the gaping hole between the lab and commercial production continues to create an unnecessary and often insurmountable barrier to commercialisation.

Co-investment between government and research agencies in pilot scale plants will facilitate and accelerate the cleantech sector in Aotearoa which is currently twenty second on the global Clean Group Innovation Index (CGII). Investment in necessary pilot scale facilities would assist to achieve government's aim of moving New Zealand into the top ten on the CGII within two years.[9]

To support the transition to a low emissions future, further work needs to be undertaken on the economics of Circular Economy models, which currently lags behind industry efforts to demonstrate and establish circular models for resources.

Behaviour change – empowering action

Behaviour change is often focused on the individual citizen. To meet the world's time critical climate targets the pace of change has to accelerate considerably. This means behaviour change and empowering action has to occur in all parts of our society, by citizens, by business and the public sector too.

Moving Aotearoa to a circular economy

The considerable buying power of government, if harnessed, could boost end-of-life circular supply chains, preventing textiles from becoming waste by processing textiles to extract the resources within them. Reducing emissions, providing environmental, economic and social benefits. It can also displace the cost and emissions of extracting and manufacturing virgin materials.

Government procurement that includes budgets for end-of-life of clothing and textiles would meet market expectation of fair and best practice. The Productivity Commission's 'Low Emissions Economy' report found that "*No serious attempt has been made to use government procurement as a lever to encourage low-emissions innovation.*"[10]

While current purchasing policy does mention end-of-life considerations, it fails to make any commitment to ensure end-of-life pathways are possible or enacted. In order to enact its own policies, government needs to fund the responsible disposal of textile products it procures rather than pushing the cost back onto manufacturers, suppliers and citizens.

Product Stewardship is a tool favoured by government. The textile industry considers that a mandated Responsibility Contribution (levy) on all textile products brought to market would

assist in addressing the huge plant and infrastructure gap. This requires further review and consideration but has the potential to drive job creation and economic benefits for Aotearoa in the textile, recycling and cleantech sectors.

The concept of 'Extended Producer Responsibility' (EPR) has been applied in Europe to many product categories, including batteries, consumer goods packaging, whiteware, and electronics. EPR is the concept that businesses bringing products to market are also responsible for supporting the take-back of the product at end-of-life to ensure that it is recycled or repurposed responsibly. The term is often used interchangeably with 'Product Stewardship'.

"The leading example of EPR in textiles has been running in France since 2008. Administered by the Producer Responsibility Organisation 'Eco TLC'. The French scheme has doubled its diversion from landfill to reuse and recycling from 18% in 2009 to 36% in 2017.[11] Fees charged are based on quantity of textiles brought to market, with a discount for more sustainable materials. The income from fees charged is allocated predominantly to fund sorting operations (73%), community education and communication (11%) and research and development and efficiency projects (3%). Although the scheme is driven by waste reduction goals, it has also contributed to increased social and economic opportunities through the creation of jobs.[12]

Outcomes from the Nordic Co-operation indicates social and economic opportunities, of reprocessing textiles, estimating that for every 10,000 tonnes of recovered textile waste 296 new jobs are created in sorting, disassembling and reuse and approximately 2000 additional work training, internships and community service opportunities.[13] In the New Zealand context this would provide regional employment in future focus jobs.

New Zealand's textile and clothing industry has co-designed a Product Stewardship Scheme which is at pilot stage. Industry has expressed an interest in a Product Stewardship Levy to fund necessary infrastructure and ongoing research and would like to explore options with the government. With limited manufacturing onshore, greater cross sector collaboration would enable resource flow between sectors. Reducing the need to import virgin materials and decreasing resource loss to landfill.

Transitioning Key Sectors

Industry

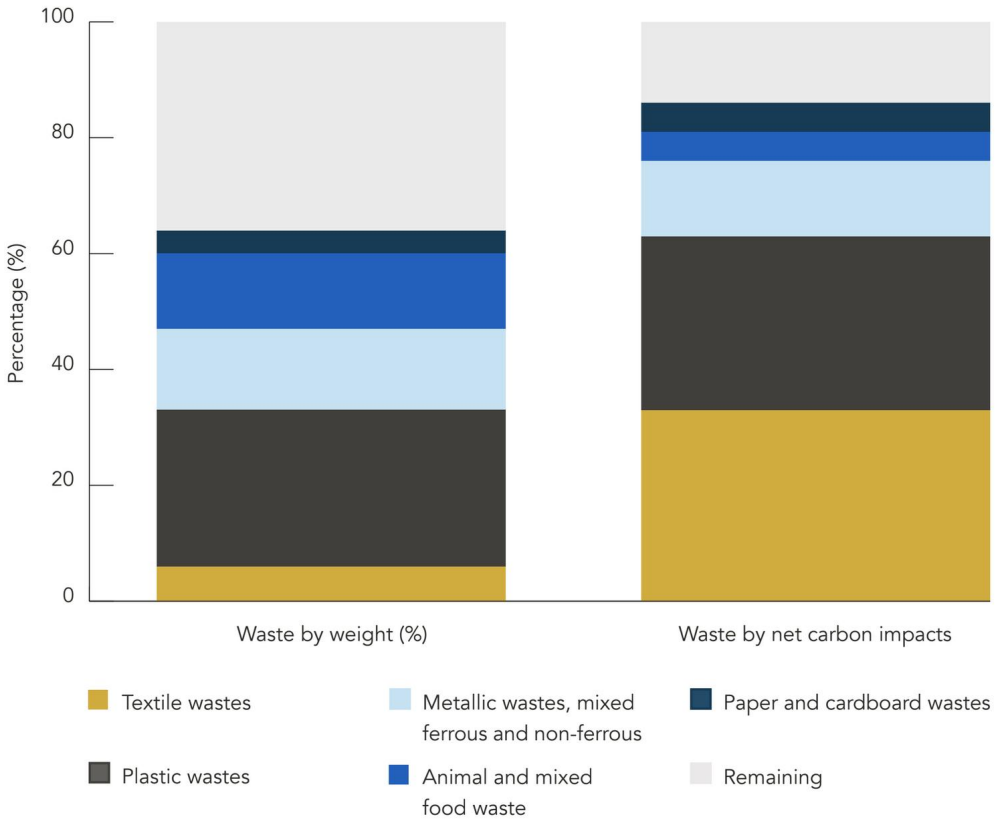
The local textile and clothing manufacturing industry continues to shrink, continuing to drive clothing and textile production offshore. Investment in plant and infrastructure onshore to reprocess end-of-use textile resources in support of the circular economy will enable the looping of used textiles resources back into commercial production. Rebuilding manufacturing and capability onshore that will support not just end-of-use, but also the start of the manufacturing value chain. Creating a more resilient industry.

Waste

The assumption that textile waste is fairly inert and unimportant in landfill ignores evidence that they generate greenhouse gases as they decompose. Usedfully's recent research estimates that annually 220,800 tonnes of textiles are landfilled each year.[14] This equates to 44 kg textiles per person each year (compared to Europe which generates 27.9 kg per person per year).[15] In terms of the climate change impact of this practice in Aotearoa, this equates to 397,440,000 kg CO_2e per year.

Scotland's Carbon Metric[16] found that materials such as textiles have high carbon impact relative to weight. For example, textiles that made up just 6% of Scottish household waste by weight, account for 34% of net carbon impacts. (See the Table below) To maximise the climate change benefits of waste and resource management, Zero Waste Scotland suggest that focus should be placed on carbon intensive waste materials such as textiles.

RELATIVE WEIGHT VS. CARBON IMPACT OF KEY WASTE MATERIALS (FOLLOWING DISAGGREGATION OF THE MIXED HOUSEHOLD AND SIMILAR WASTES CATEGORY



Vast amounts of money are spent landfilling these valuable products and materials, meanwhile virgin resources continue to be extracted, manufacturing emissions escalate, and environmental and social impacts increase.

Currently textiles are absent from the regulations that govern waste in Aotearoa. At their end-of-life textiles need to be recognised as a potentially complex, persistent plastic / organic / or mixed waste.

Until recently, Aotearoa's management of waste relied on local landfills and exporting 'recyclable' materials to offshore processing plants. The closure of countries borders due to concerns over potential contamination of used clothing, skyrocketing freight price and lack of availability of shipping containers is likely to magnify the issue of textile waste in Aotearoa.

Research into technological solutions to reuse textile waste is emerging, however it is already clear that a focus on reuse, resale, repair, and repurposing used clothing and textiles is also needed to fully address impacts. For Aotearoa to make significant inroads on both reducing our dependence on importing new textiles and reducing the amount of textile waste going to landfill, a combined focus is needed.

The experience of the waste packaging industry in New Zealand is illustrative. Following their lead, it is now time to take responsibility for managing our end-of-use textiles onshore, investment in necessary plant and infrastructure will bring textiles into the circular economy.

Most clothing and textiles ultimately end up in landfill, releasing greenhouse gases as they decompose. While the rate of emissions varies by geography (and level of research), there is alignment on the fact that after food waste, textiles are a hotspot for emissions in landfill. According to recent research in Australia by Eunomia, textiles were identified as having the second highest potential both in terms of reduction of consumption, and improved recycling.[17]

The New Zealand government has recently made 6 waste streams priority products, requiring mandatory Product Stewardship Schemes and focusing supporting policy, funding and investment on this group of products. Despite their impacts, textiles have been omitted from the priority products list. Synthetic textiles while in use represent a complex, persistent plastic waste stream that is currently being ignored. Scion's water quality studies in Auckland has found that 87% of micro plastic pollution in fact comes from clothing fibres.[18] Unlike plastic packaging that has to wash around to break down, when synthetic garments are washed they shed tens of thousands of fine plastic filaments. Too fine to be collected in our waste water management systems they flow into our waterways. Their superfine structure makes them immediately ingestible by plankton and shellfish and so they directly enter our food chain.

Action to address microplastic pollution from synthetic textiles is urgently required. Including synthetic textiles in current plastic policy will focus funding and resources towards the greatest contributor to New Zealand's plastic pollution. Including textiles in the current plastics category priority products will enable Aotearoa to meet the outcomes of Te Mana o Te Wai - "*Making immediate improvements so water quality improves within five years and reversing past damage to bring our waterways and ecosystems to a healthy state within a generation. It ensures the health and well-being of the water is protected and human health needs are provided for before enabling other uses of water. By protecting the health and well-being of our freshwater we protect the health and well-being of our people and environments.*"[19]

Natural textiles such as cotton, wool, linen etc also need to be removed from textile waste and treated as organic waste. By taking this action New Zealand would be following complementary economies such as Finland, which in 2016 placed a ban on organic waste being sent to landfill (which includes organic textiles).

The importation of rags demonstrates that New Zealand is being used as a dumping ground for other countries' textile waste. A ban on the importation of rags would encourage the diversion of our own waste textiles for this purpose. Action on synthetic and natural textiles would automatically include a ban on landfilling unsold stock that can be reused or recycled.

New Zealand's waste policy lags behind Australia, and Europe where understanding of the resource implications and impacts of the textiles sector has matured to the regulatory phase. This represents an opportunity for New Zealand to consider its response to what is a global phenomenon, benchmarked against those being implemented in other economies.

For example policies oblige European Member States to:

- Collect textiles separately by 2025;
- Ensure that textile waste collected separately is not incinerated or landfilled

It is time to realise opportunities for better environmental and economic outcomes for Aotearoa and in so doing, protect our reputation as a global citizen.

- The Climate Change Commission's recommended emissions reduction target for the waste sector significantly increased in its final advice. We support the target to reduce waste biogenic methane emissions by 40 per cent by 2035.
- We support more funding for education and behaviour change initiatives to help households, communities and businesses reduce their organic waste (for example, food, cardboard, timber AND textiles).
- We support a proposal to ban the disposal of food, green, paper waste AND textiles at landfills for all households and businesses by 1 January 2030, if the necessary investment has been made into alternative ways to recycle these resources instead.
- We support a proposal to ban all organic materials (including textiles) going to landfills that are unsuitable for capturing methane gas. With the redirection of compostable resources to urban networks of composting sites and regenerative organic farms, creating meaningful jobs, connected communities and access to nutritious food. As well as sequestering carbon, restoring biodiversity, decreasing food packaging, and improving food resilience.
- We support a potential requirement to install landfill gas (LFG) capture systems at landfill sites that are suitable.
- We would support a more standardised approach to collection systems for households and businesses, which prioritises separating recyclables such as fibre (paper, cardboard AND textiles) and food and garden waste.
- We think transfer stations should be required to separate and recycle materials, rather than sending them to landfill.

- To reduce refrigerant emissions, in combination with other aspects of heating and cooling design, such as energy efficiency and building design. We are aware of new technology developed by Edmund Hillary Fellow Tim Moor. His Vorte technology runs from compressed air replacing traditional cooling, freezing and heating applications.

Forestry

We support the significant increase in new native forests and the assumption that no further native deforestation occurs from 2025. All native habitats must be incorporated into this approach. For example, wetlands and tussock should be recognised for their role in storing carbon, and protected from destruction.

Concluding thoughts

This submission has been prepared in response to government's discussion paper and carries the voice of the textile and clothing industry of Aotearoa, New Zealand. To raise awareness of the impacts of the clothing and textile sector, and to foster government engagement to support the necessary actions to address the challenges we face as an industry, a country and as global citizens.

Industry willingness can be harnessed to create meaningful impact through multi-stakeholder collaboration between sectors and between private business and the public sector. This is an imperative and will provide an opportunity for Aotearoa to move to a more resilient, low carbon future, while meeting our climate change commitments.

New Zealand's clothing and textile industry is working to reduce textile emissions, going beyond individual campaigns and promotions at the product level, towards implementing concrete, systemic solutions at a national scale. The industry recognises the outcomes it is seeking are not completely within its control and require deeper understanding and a co-operative approach. To that end is looking for partnership with government to achieve decarbonisation goals. The opportunities are significant, we urge the government to reflect on the recommendations provided here, and to take action to support increased activity in this space.

This submission has been prepared by industry leadership group Usedfully – Textile Reuse Programme which aligns the clothing and textile industry in Aotearoa in a joint vision and commitment to a circular system. Enabling the transition to a low-carbon future by co-creating systemic solutions, fostering a more sustainable and resilient industry.

Organisations supporting this submission: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