

# CircularID<sup>TM</sup> Protocol

## Pilot Version

The industry-wide protocol for digital identification  
of products in the circular economy

Protocol managed by:

EON<sup>TM</sup>



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**CircularID™**  
#00145233989844

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# INTRODUCTION AND OVERVIEW

The CircularID™ Protocol is the global protocol for digital identification of products in the circular economy. Through adoption of the CircularID™ Protocol, brands can create CircularID™ Connected Products and drive the shift to circular and connected business models—connecting with products, customers and partners across the entirety of the product lifecycle.

The data fields of the CircularID™ Protocol enable the identification of products and materials for resale, repair, reuse and recycling; support reverse logistics and new circular business models; and provide the capabilities to accurately measure circular economy efforts and goals. CircularID™ Protocol introduces a consistent format of these data fields so brands can exchange and access data across the lifecycle and have visibility and connectivity with products after point-of-sale. CircularID™ Protocol ensures that product and material-level data essential to circular functions is accessible and communicated in a consistent way.

Adoption of a shared protocol for product digitization allows all products to share essential information about themselves to the circular value chain. CircularID™ Protocol does not make, hold, store or control any product data. Rather, it puts forward a framework for how product data should be structured and recorded when a product is digitized. When products are digitized in alignment with the CircularID™ Protocol, products “speak the same language.”



# OBJECTIVES

## The Objectives of the CircularID™ Protocol are:

1. Power new circular business models based on selling services instead of products
2. Unlock data and systems essential for maximizing value and recovery of products and materials
3. Bring transparency and accountability to the product lifecycle

## CircularID™ Protocol is designed to:

### Reduce Resource Consumption

CircularID™ Protocol can reduce consumption and reliance on natural resources by making it possible to reuse and recover products and materials already in circulation.

### Create Transparency

CircularID™ Protocol gives every product a unique digital profile, enabling item-level transparency not just from production to point-of-sale, but also through use, reuse, and recycling/regeneration.

### Power Resale

CircularID™ Protocol makes it possible to instantly access information essential for identification and resale (e.g. brand, authenticity, description, sizing, materials). Today, resellers spend long periods of time trying to identify products for resale, manually entering all supporting product details. CircularID™ Protocol will maximize economic value of products in the secondary market.

### Power Collection and Sorting

CircularID™ Protocol makes it possible to identify materials and products quickly and efficiently, down to component parts and materials, in a way that no existing machinery or technology can. With CircularID™ Protocol, scaled, efficient and quick sorting for commercialized reselling and recycling processes are possible.

### Power Repair

CircularID™ Protocol makes it possible to identify product components to support repair. For example, a repair organization can scan the product and identify the exact zipper type, so that it can be ordered and replaced, restoring the product to original quality.

## Power Recycling & Regeneration

CircularID™ Protocol streamlines access to information about the product essential to mechanical and chemical recycling processes (e.g. blended material content, dye color and process, chemical content) and enables efficient sorting for a diverse range of unique recycling specifications.

## Power Rental & Sharing

CircularID™ Protocol powers item-level tracking and reverse logistics essential for rental, sharing, and subscription business models.

## Improve Customer Experience

CircularID™ Protocol provides the ability for brands and retailers to engage with customers at a deeper level through the product, beyond point of sale, providing a deeper understanding of the brand, product story, and next-life instructions.

## Enable Measurement and Accountability

CircularID™ Protocol unlocks transparency essential to measuring and analyzing product movement throughout all segments of the circular economy.

# DEVELOPMENT PROCESS & TIMELINE

## A. Development Process

To develop and champion adoption of the CircularID™ Protocol, the CircularID™ Initiative was established by Eon Group in 2019. The CircularID™ Initiative brings together retail industry leaders, and partners from circular businesses, technology, policy, and academia—representing key value chain stakeholders, critical to informing the development of the CircularID™ Protocol. Founding Members and Knowledge Partners of the CircularID™ Initiative include Closed Loop Partners, H&M Group, Target, PVH Corp., C&A Foundation, Accenture, Microsoft, GS1 US, Waste Management, The Renewal Workshop, ForDays, IDEO, and I:CO. These Members and Partners worked in collaboration to develop, review and finalize the CircularID™ Protocol Pilot Version.

The CircularID™ Protocol Pilot Version has been developed in alignment with the ISEAL Code of Good Practice for setting Social and Environmental standards. The ISEAL Code of Good Practice provides a clear framework for the development of standards, defining how a standard should be developed, structured and revised.

The development process included consultation and feedback with CircularID™ Initiative member organizations, as well as leading companies and organizations such as the Sustainable Apparel Coalition, Open Apparel Registry, Textile Exchange, ISEAL, RISE Research Institute of Sweden, Revolve Waste and Tyton BioSciences.

To ensure the CircularID™ Protocol considered all aspects, needs and existing efforts in the value chain, the Protocol went through two rigorous and open industry-wide peer review Public Comment Periods where comments and recommendations were collected from fashion and retail industry leaders and partners from circular businesses, brands, retailers technology, policy, subject matter experts, NGOs, standards organizations and academia.

The development process was led by Annie Gullingsrud, Eon's Chief Strategy Officer, who has worked with fashion industry standards organizations such as Cradle to Cradle Products Innovation Institute and Textile Exchange; collectors, sorters and resellers such as Goodwill; and a range of innovative chemical recyclers for post-consumer textiles.

## B. Alignment with Existing Industry Standards

The CircularID™ Protocol has been developed to leverage and align with existing data standards already being used by brands and retailers. The development process included research and alignment with existing industry organizations, such as GS1 System of Standards, Sustainable Apparel Coalition's Higg Index, and Textile Exchange standards.

The CircularID™ Protocol leverages and aligns with GS1 System of Standards. The GS1 System of Standards provides a common language to identify, capture and share product data and is the most widely used global supply chain standard.

## C. Next-Steps

Throughout 2020, the CircularID™ Protocol will be in pilot. The pilots will be used to evaluate and improve the CircularID™ Protocol before launching CircularID™ Protocol Version 1.0 publicly in 2021. If interested in piloting the CircularID™ Protocol, please visit *Section VIII. Pilot* of this document for further information.

In January 2021, the CircularID™ Protocol Version 1.0 will launch to industry. CircularID™ Protocol Version 1.0 will be publicly available and published with the fields and values essential for CircularID™ products. CircularID™ Protocol Version 1.0 will include Implementation Guidelines, a set of recommendations for how to successfully implement the CircularID™ Protocol.

## D. Timeline 2019-2021

- **Jan - July 2019** – CircularID™ Initiative internal development of CircularID™ Protocol
- **July 2019** – CircularID™ Initiative completion of CircularID Protocol draft for Public Comment review
- **July 29 -October 30, 2019** – 60-day Public Comment Period #1 to collect feedback through public commenting platform
- **October 14 – November 14, 2019** – Updated draft launched for 30-day Public Comment Period #2 to collect feedback through public commenting platform
- **January – December 2020** – CircularID™ Protocol Pilot Version to be implemented in pilots with CircularID™ Initiative Members
- **January 2021** - CircularID™ Protocol Version 1.0 and Implementation Guidelines launch to industry

# GOVERNANCE

The CircularID™ Protocol is owned by Eon and is managed and released by the designated Voting Members of the CircularID™ Initiative. Throughout 2020, the Members of the CircularID™ Initiative will evaluate and improve the CircularID™ Protocol before launching CircularID™ Protocol Version 1.0 publicly in 2021. Following the release of CircularID™ Protocol Version 1.0 in 2021, the Voting Members of the CircularID™ Initiative will maintain the CircularID™ Protocol until the time of the next revision.

# TARGETED USER GROUPS

## Targeted User Groups

There are four (4) targeted user groups that the CircularID™ Protocol is designed to provide essential data to:

Stakeholder Group	Roles	Impact & Value of CircularID™ Protocol for Targeted User Groups
Circulators	Collectors, Sorters, Resellers, Renters, Peer-to-Peer reselling, Repairer, Digital Wardrobe	CircularID™ Protocol: <ul style="list-style-type: none"> <li>• Enables transactions</li> <li>• Identifies products and materials for reverse logistics, collections and sorting</li> <li>• Enables efficient economy and marketplace</li> <li>• Creates economic viability</li> <li>• Communicates embedded value</li> <li>• Captures maximum value of products</li> <li>• Improves sorting efficiencies</li> </ul>
Regenerators	Recyclers (includes ALL types of recyclers)	CircularID™ Protocol: <ul style="list-style-type: none"> <li>• Captures maximum value of materials</li> <li>• Provides accurate data and specification about materials to inform disassembly and recycling</li> <li>• Unlocks possibility for materials to meet unique technology specifications</li> <li>• Improves sorting efficiencies</li> </ul>
Product Owner	Brands, Retailers	CircularID™ Protocol: <ul style="list-style-type: none"> <li>• Creates economic viability and visibility</li> <li>• Creates opportunity for ongoing revenue from existing product</li> <li>• Builds circular brand integrity and equity</li> <li>• Unlocks transparency across the product lifecycle</li> <li>• Creates the ability to share, exchange and access data with circular economy partners</li> <li>• Facilitates measurement of circular economy goals</li> </ul>
Customer	Individual who uses product	CircularID™ Protocol: <ul style="list-style-type: none"> <li>• Helps customers maximize the use and value of product</li> <li>• Helps customers make intelligent decisions about purchases</li> <li>• Enables ease of sustainable quality and narrative</li> <li>• Allows customers to connect with brands after purchase to build more meaningful connections.</li> </ul>

# PRIMARY FUNCTIONS AND STRUCTURE

## Primary Functions Enabled by the CircularID™ Protocol

There are two (2) primary functions that the CircularID™ Protocol supports: the identification of products and identification of materials.

### 1. Identification of Products – supports continued use/circulation of products

CircularID™ Protocol enables the continued identification and monetization of products through circular business models (e.g. rental, resale) and the management of products through channels for continued use and circulation (e.g. repair, reverse-logistics, peer-to-peer, collections, etc.).

### 2. Identification of Materials – supports continued use/regeneration of materials

CircularID™ Protocol enables the identification of materials for regeneration, including disassembly and recycling.

## Structure

Aligned with the two (2) primary functions of CircularID™, the CircularID™ Protocol is structured in two (2) parts – each with unique data requirements.

### The two (2) parts of the CircularID™ Protocol are:

#### 1. Product ID

The Product ID includes all information required to enable commercial identification of the product, in order to facilitate the ongoing management, circulation and monetization of the asset. Examples of data fields in the Product ID include: Brand, Size, Color, MSRP (Manufacturer Suggested Retail Price), etc.

#### 2. Material ID

The Material ID includes all information required for the identification of the materials of the product, in order to facilitate management of the product's material components. This information is considered essential for the regeneration of the materials and supports processes such as disassembly and mechanical and chemical recycling. Examples of data-fields in the Material ID include: Material Content, Dye Process, Thread Type, etc.

**To download the CircularID Protocol Pilot Version, or to learn more about CircularID™ Connected Product Pilots and CircularID™ Initiative Membership, visit [eongroup.co](http://eongroup.co) or contact us at: [connect@eongroup.co](mailto:connect@eongroup.co)**

# IMPLEMENTATION

## CircularID™ Connected Products

When a product is digitized in alignment with the CircularID™ Protocol, it is called a CircularID™ Connected Product. A CircularID™ Connected Product is one that is digitally identified, with data essential for the circular economy (CircularID™ Protocol) and connected to the Internet of Things. The essential data is then made accessible to identified value chain partners.

A CircularID™ Connected Product is complete with a digital twin, also known as a digital identity. A digital identity is a virtual replica of a physical product. Digital identity makes it possible to connect a product to the Internet of Things (IoT), and exchange information about the product via the internet. To link the physical product to the IoT requires that a digital identifier (e.g. RFID, QR Code, NFC) be attached to the physical product. Through interactions (e.g. scan, tap, or photograph) with the digital identifier, access to the product's digital profile can be provided.

Aligning the data fields of the digital identity with the CircularID™ Protocol ensures all data essential for managing products and materials in the circular economy is consistently included and structured.

## Following components are required for implementation:

### 1. Physical Identifier

In order to associate a physical asset with its digital profile, it needs a physical identifier that must remain attached or embedded within the asset for the entirety of its lifecycle.

An identifier that is permanently attached to the product allows product data to be efficiently accessed, verified, and expanded across the product's lifecycle. Examples of identifiers include RFID, NFC, QR Code, UPC barcode, and others, provided they are designed to remain intact for the full lifetime of the product. Interacting with the identifier is what allows data to be accessed from (and added to) the product's digital profile. Without it, there is no way to associate item-specific data with an individual physical item.

### 2. Digital Birth Certificate with CircularID™ Protocol

A CircularID™ Connected Product has a Digital Birth Certificate. A product's core data consists of all the permanent attributes of a product required to maximize its functional and economic utility for the duration of its lifespan, as well as information that is critical for regenerative processing at the end of its lifecycle.

The data fields of the Digital Birth Certificate are the defined data-fields of the CircularID™ Protocol, and include information about the Product and Materials. A Digital Birth Certificate is created for a finished product.

### 3. Digital Passport

A CircularID™ Connected Product has a Digital Passport. The Digital Passport includes the record of interactions with a product throughout its lifecycle. An interaction occurs whenever the product's digital identifier is engaged with. Examples of interactions include scanning a product's QR code or tapping a product's NFC chip. These interactions are recorded into a product's Digital Passport, adding visibility into the product's real-world utility and value.

The interactions in the product's Digital Passport provide unprecedented insight and measurability into the lifetime economic value of a product. Through data built within digital passports, brands and industry stakeholders gain invaluable insights into product usage, durability, and movement, incentivizing products to be designed and built for maximum lifetime value. Records of interaction data must maintain consumer privacy and confidentiality through rigorous security and data governance.



# PILOT

Throughout 2020, Eon Group will be implementing the CircularID™ Protocol Pilot Version with CircularID™ Initiative members and leaders in the apparel industry to launch the first CircularID™ Connected Products.

Through these pilots, fashion and apparel products will be digitized in alignment with the CircularID™ Protocol Pilot Version. The pilots will be used to evaluate and improve the CircularID™ Protocol before launching CircularID™ Protocol Version 1.0 publicly in 2021.

**If your company is interested in piloting the CircularID Protocol Pilot Version, contact [connect@eongroup.co](mailto:connect@eongroup.co) to learn more.**



# CIRCULARID™ PROTOCOL PILOT VERSION-DATA FIELDS



**CircularID™**

#00145233989844



BRAND NAME

MATERIALS

SIZE

FACTORY ID #

RECYCLING INSTRUCTIONS

SALE PRICE

WHERE TO BUY



# PRODUCT ID

The Product ID includes all information required to enable commercial identification of the product, in order to facilitate the ongoing management, circulation and monetization of the asset.

## COMPANY

<b>Business Entity</b>	<b>Description</b>	Business entity that manufactured or contracted the manufacture of the item.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Offers ability to give economic and material value back to the organization.</li> <li>• Creates recognition structure for "owner of" - legal entity that is responsible. Will allow companies to be able to quantify their circular progress, and validate their integrity of commitments made. This will help brands show their customers that they are fulfilling company commitments to circularity.</li> <li>• This allows the product to be returned to the company, and incentivizes companies to open the channel for take-back, rental, repair, etc.</li> </ul>
	<b>Data Example and Format</b>	Plain text Examples: PVH, H&M, Target

<b>Parent Brand</b>	<b>Description</b>	This is the brand responsible for its design and manufacture.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Offers brand control and understanding.</li> <li>• Circulators need this information to properly resell the product.</li> <li>• This could also be how customers search for a product.</li> </ul>
	<b>Data Format and Example</b>	Plain text Examples: Tommy Hilfiger, H&M, Cos, Weekday

<b>Brand on Label</b>	<b>Description</b>	Brand listed on physical label on the garment label.
	<b>Rationale</b>	Circulators need this information to properly resell the product. The brand is how customers search for a product.
	<b>Data Format and Example</b>	Plain text Examples: Calvin Klein, Cat & Jack, H&M, H&M Conscious, Hilfiger Denim, Cos, Weekday

## IDENTIFICATION NUMBER

<b>SKU</b>	<b>Description</b>	Product-level ID number assigned by the brand.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• This would enable a way to group individual garments per SKU type and group items for reporting purposes.</li> <li>• This would be the "connector" of product level data back to the brand's internal system within a company.</li> </ul>
	<b>Data Format</b>	Alpha-numeric SKU number

<b>Globally Unique Item Identification Number</b>	<b>Description</b>	<ul style="list-style-type: none"> <li>• This is a unique number associated with the specific item as governed by a global standards company, such as GS1. The GS1 Standard for product level identification is the Global Trade Identification Number (GTIN). The Serialized Global Trade Identification Number (SGTIN) is generated from the GTIN, and is an item-level number associated with that specific item.</li> <li>• GS1 Digital Link will be used to create a unique web location for the CircularID™. In order to generate a digital link using the GS1 Standard a GTIN is required.</li> <li>• As GS1 is the global organization responsible for developing unique product identification codes across industry, the CircularID™ Protocol will use the GS1 Standard to uniquely identify products.</li> </ul>
	<b>Rationale</b>	SGTIN allows differentiation of an individual item globally, and outside the company itself. Has a global standards body supporting it.
	<b>Data Format</b>	GS1-compliant SGTIN / EPC

## PRODUCT CATEGORIZATION

<b>Categorization 1: Primary use purpose of the item</b>	<b>Description</b>	The primary use purpose of the product
	<b>Rationale</b>	This is helpful for categorizing the product for resale.
	<b>Data Format &amp; Example</b>	<p>The list of values for this field will be developed and finalized during CircularID™ Pilots.</p> <p>Examples: Apparel (this Protocol is based on Apparel) Footwear Home Accessories (not exhaustive list)</p>

<b>Categorization 2: Intended item user</b>	<b>Description</b>	What age and identity is this item intended for
	<b>Rationale</b>	This is helpful for sorting the product for resale. All Circulators categorize in this general way.
	<b>Data Format and Examples</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.  Examples: Women's Men's Youth-Girls Youth-Boys Toddler-Girls Toddler-Boys Infant-Girls Infant-Boys Adult Gender Neutral/Non-binary (not exhaustive list)

<b>Categorization 3: Product Type</b>	<b>Description</b>	Basic product type
	<b>Rationale</b>	Essential to group products on ecommerce sites.
	<b>Data Format and Examples</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.  Examples: Top, Bottom, Dress, Swim

<b>Categorization 4: Item</b>	<b>Description</b>	Specific item
	<b>Rationale</b>	Essential to group products on ecommerce sites. This would also allow users to report and pull data based on Item categories, such as "Top," "Bottom" and "Dress"
	<b>Data Format and Examples</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.  Examples: Shirt T-shirt Sweater Vest Jacket Denim Pants Skirt

## CUSTOMER FACING CONTENT

<b>Product Name (on website)</b>	<b>Description</b>	Product's Name according to the Brand that is on the brand's website
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>This name is how customers search for products, especially iconic products.</li> <li>This could also be the name of a product—so a customer could search for a specific style of jeans they know fits them well.</li> </ul>
	<b>Data Format and Example</b>	Plain text  Example: Women's Nau Puffer Vest

<b>Ecommerce Description</b>	<b>Description</b>	Product description on website, according to originating brand.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>This is essential in resale; customers want more information about the products they are buying.</li> <li>This will ensure a higher level of accuracy and efficiency for resale, transferring the established Ecommerce description from the originating brand.</li> </ul>
	<b>Data Format</b>	Plain text

<b>Ecommerce Photograph</b>	<b>Description</b>	Product photograph for use on ecommerce, according to originating brand.
	<b>Rationale</b>	This would offer an opportunity to cut costs for photography and models for Circulators, and ensure design intention is carried through generations of use. Will potentially enable (depending photographs provided): - Faster digital production for e-commerce site (white background stills) - Image upload to second hand markets - Demonstration to customers of Circulators the original intended fit and drape of garment
	<b>Data Format</b>	URL(s) to valid image(s) – JPG/JPEG, PNG, GIF

## PRICE

<b>Original Price (or MSRP)</b>	<b>Description</b>	Manufacturer's suggested retail price (MSRP). Also known as sticker price or list price, or original price of the product. This is not necessarily the price the product sold for.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>Point of reference of original MSRP to start determining resell price.</li> <li>We determined this is better for Circulators than a range.</li> <li>"MSRP is critical for the best-selling experience. We have found that customers want to know what kind of discount they are getting off the product, we have done tests with a 20% discount off MSRP and then showing them the new price. And what resonates is a strike through on MSRP. "**</li> </ul>
	<b>Data Format</b>	Number plus currency (ISO 4217) + Country Code

\*Quote from Circulator during Research interview

<b>Countries of Intended Original Sale</b>	<b>Description</b>	The countries where the product was originally intended to be sold (if applicable).
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Certain product-details (i.e. MSRP, Size, Description) change based on country of intended original sale. This field would enable the original brand and also the Circulators to associate the appropriate data with the product, based on the country of intended sale.</li> <li>• This field could potentially solve for the complexity around a variety of topics related to country-specific factors.</li> </ul>
	<b>Data Format</b>	“standardized” country-code format (ISO 3166)

**PHYSICAL ATTRIBUTES**

<b>Color Family</b>	<b>Description</b>	The main color represented on a garment or color grouping in ecommerce.
	<b>Rationale</b>	Essential to group products on ecommerce sites. The colors in the Data Format will represent the basic colors across many brands, retailers and Circulator Ecommerce sites.
	<b>Data Format and Examples</b>	<p>The list of values for this field will be developed and finalized during CircularID™ Pilots.</p> <p>Examples: Black, Gray, White, Cream/Ivory, Brown, Tan, Red, Pink, Orange, Yellow, Green, Blue, Purple, Gold, Silver, Transparent, Multi (all colors represented equally) not yet an exhaustive list</p>

<b>Size</b>	<b>Description</b>	Size of garment listed on tag.
	<b>Rationale</b>	Essential for Circulators. This info will be on the tag, but including in the ID will ensure the info stays with the garment even if tag is cut off.
	<b>Data Format and Examples</b>	<p>The list of values for this field will be developed and finalized during CircularID™ Pilots. Since there is currently no standardization for sizing, we are recommending a basic structure that will be most helpful to Circulators.</p> <p>Examples 36 8 32X32 Medium 2T</p>

<b>Country Size Standard</b>	<b>Description</b>	Sizing system associated with product.
	<b>Rationale</b>	Knowing the size standard will allow Circulators to know what the size number means because they will know what system it is from.
	<b>Data Format and Examples</b>	<p>The list of values for this field will be developed and finalized during CircularID™ Pilots.</p> <p>Examples US IT FR</p>

<b>Material Composition (on clothing label)</b>	<b>Description</b>	This is the composition that appears on the clothing label attached to the garment.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Essential for customers and Circulators for reselling.</li> <li>• This would be the info that is customer facing.</li> <li>• This info will be on the tag, but including in the CircularID™ will ensure the info stays with the garment even if tag is cut off.</li> </ul>
	<b>Data Format and Example</b>	<p>Material name plus % of composition</p> <p>Example: 90% Cotton, 10% Spandex</p>

<b>Recycled content</b>	<b>Description</b>	This is the % recycled content in a garment.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Recycled content is a selling point for Circulators, and including this information in the CircularID™ will enable the continuous communication of this content throughout its use and resale.</li> <li>• Recycled content is not always communicated on the garment label, so including in the CircularID™ will ensure this essential information gets passed on through circulation channels.</li> </ul>
	<b>Data Format</b>	<p>Material name plus % of composition recycled</p> <p>Example: 45% Recycled Cotton</p>

<b>Net weight</b>	<b>Description</b>	Final product weight excluding packaging.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Knowing the weight helps with measuring the environmental impact of a product. Weight also is a useful in resale as a point of interest to the customer.</li> <li>• We are focused on including “net weight” since it is the product weight and relatively fixed. We are not suggesting including “gross weight” (product plus potential packaging weights ) since it is variable and is based on the various packaging options – different vendors have different packaging requirements from a single brand/manufacturer.</li> </ul>
	<b>Data Format</b>	<p>Grams / kg</p> <p>Example: 138 grams</p>

## PRODUCTION INFO

<b>Season/Year of Intended Sale</b>	<b>Description</b>	This is the Season and Year that the garment is intended to sell for.
	<b>Rationale</b>	Sometimes the manufacture date and Season/Year will be different; We are prioritizing Season/Year as it represents the commercial value associated with the product.
	<b>Data Format and Example</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.  e.g. Spring/Summer 2019

<b>Country of Manufacture (Final Assembly Stage)</b>	<b>Description</b>	Country of manufacture in final assembly stage.
	<b>Rationale</b>	Essential to be able to map the garment back to country of manufacture. Country and Facility ID # (below) would both be included to bring a greater sense of transparency to where the garment was created.
	<b>Data Format</b>	ISO 3166

<b>Facility Identification #</b>	<b>Description</b>	Facility Identification # is the number assigned to the facility that made the finished garment from an existing factory member identification system, such as Facility Identification # in Open Apparel Registry (OAR) or GLN database (GS1).
	<b>Rationale</b>	Provides vehicle to identify exactly where product came from. This # will also connect to the facility-based certifications the facility has achieved.
	<b>Data Format and Examples</b>	Facility identification number  Examples: Facility Identification in Open Apparel Registry (OAR) or GLN database (GS1)

## CERTIFICATIONS

<b>Product Certifications</b>	<b>Description</b>	Certifications the product has received.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Could be used as a selling point for resale.</li> <li>• Extends value of production certification beyond first point of sale</li> </ul>
	<b>Data Format</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.  Examples: GOTS Certified, Fairtrade, Organic

<b>Factory-level certifications</b>	<b>Description</b>	List any certifications that the factory making the final product has received.
	<b>Rationale</b>	<ul style="list-style-type: none"> <li>• This would enable the ability to connect the product to certifications used in that factory.</li> <li>• Could also be used as a selling point for resell. Extends value of certification.</li> </ul>
	<b>Data Format</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.

# MATERIAL ID

The Material ID includes all information required for the identification of the materials in the product, in order to facilitate management of the product's material components. This information is considered essential for the regeneration of the materials and supports processes such as disassembly and mechanical and chemical recycling.

## VISUAL ATTRIBUTES / LABEL MATERIALS

<b>Color Family</b>	<b>Description</b>	The main color represented on a garment or color grouping in ecommerce.
	<b>Rationale</b>	This information is also essential for the Regenerators—sometimes mechanical recyclers will mix colors, like paint, to produce different yarn colors. Providing this information will help to sort by color, and then material type (e.g. white 100% cotton).
	<b>Data Format and Examples</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.  Examples: Black, Gray, White, Cream/Ivory, Brown, Tan, Red, Pink, Orange, Yellow, Green, Blue, Purple, Gold, Silver, Transparent, Multi (all colors represented equally) not yet an exhaustive list
<b>Fabric Type</b>	<b>Description</b>	Type of fabric for the body of the garment.
	<b>Rationale</b>	Essential for regenerators to determine if a good match with their technical specification for recycling.
	<b>Data Format</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.  Examples: e.g. Knitted, Woven, Leather, Non-Woven, Felt
<b>Material Composition (on clothing label)</b>	<b>Description</b>	This is the composition that appears on the clothing label attached to the garment.
	<b>Rationale</b>	Essential for regenerators to determine if a good match with their technical specification for recycling (along with the detailed information below)
	<b>Data Format and Example</b>	Material name plus % of composition  Example: 90% Cotton, 10% Spandex

## MATERIAL CONTENTS

<b>Dyestuff and print ink type</b>	<b>Description</b>	Dyestuff and print ink type (if any)
	<b>Rationale</b>	Determined as priority in Public Comment Round 1. We have found that recyclers need much more than what's on the tag to determine whether the garment can work in their recycling process. Knowing dyestuff and/or print ink can either contribute to or impede the regeneration process.
	<b>Data Format</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots
<b>Trims Type and Content</b>	<b>Description</b>	Trims Type and Content
	<b>Rationale</b>	Determined as priority in Public Comment Round 1. We have found that recyclers need much more than what's on the tag to determine whether the garment can work in their recycling process. Knowing trims type and content can either contribute to or impede the regeneration process.
	<b>Data Format</b>	Trim component plus material name.  The list of values for this field will be developed and finalized during CircularID™ Pilots.
<b>Sewing Yarn Content</b>	<b>Description</b>	Sewing Yarn Content + Alternatives to sewing (e.g. bonding)
	<b>Rationale</b>	Determined as priority in Public Comment Round 1. We have found that recyclers need much more than what's on the tag to determine whether the garment can work in their recycling process. Knowing the sewing yarn content matters and can either contribute to or impede the regeneration process.
	<b>Data Format</b>	Material name  The list of values for this field will be developed and finalized during CircularID™ Pilots.
<b>Fabric Chemical Finishes</b>	<b>Description</b>	Fabric finishes used on the garment, such as water repellency, nonflammability, anti-microbial
	<b>Rationale</b>	Determined as priority in Public Comment Round 1. We have found that recyclers need much more than what's on the tag to determine whether the garment can work in their recycling process. Knowing fabric chemical finishes matters and can either contribute to or impede the regeneration process.
	<b>Data Format</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.

<b>Screenprinting or heat transfer label?</b>	<b>Description</b>	Y/N if includes screenprinting or heat transfer labels.
	<b>Rationale</b>	Screenprinting and heat transfer labels can prevent a Regenerator from being able to recycle a complete garment. Knowing this information will allow for better sorting for regenerators.
	<b>Data Format</b>	Select "Heat Transfer" OR "Screenprinting" OR No.

<b>Product Chemical Compliance</b>	<b>Description</b>	This are the product chemical lists that the product is compliant with, such as REACH. This could be a brand-level chemicals compliance list.
	<b>Rationale</b>	Determined as priority in Public Comment Round 1. Chemical compliance would be useful for recyclers, to determine compliance with the specifications of their process.
	<b>Data Format</b>	The list of values for this field will be developed and finalized during CircularID™ Pilots.



Eon is the market-leading digital identity platform — connecting products to the Internet of Things (IoT) to drive intelligence and connectivity across fashion and apparel. The Eon platform powers enterprise intelligence, customer engagement, and new business models. Eon’s software-as-a-service (SaaS) platform is the trusted IoT solution for global brands and retailers to create digital profiles, manage product data and introduce intelligence and connectivity to products. Eon’s platform is accessible via open APIs, enabling connections to all applications, to power a fully-functioning digital ecosystem.

Eon’s mission is to power the shared digital foundation for circular economy. Leading industry’s end-to-end digital transformation, Eon leads the development of the CircularID™ Protocol, the global Protocol and digital system for identification and management of products in circular economy, through a collaboration of industry stakeholders and leaders. Eon digitizes products in alignment with the CircularID™ Protocol — making it possible to share access and generate data from products throughout their lifecycle and to communicate with partners across the value chain.

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