Waste to Wealth
Creating Advantage in a Circular Economy

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The business case for the Circular Economy is compelling and leading companies are beginning to transition.

The business case for the Circular Economy

From linear… | …to circular… | …creating opportunities

Linear Value Chain
- Take
- Make
- Waste

Circular Value Chain
- Take back
- Repurpose & Share
- Use & Reuse
- Sell & Resell
- Manufacture & Remanufacture
- Restore & Reprocess

- Unsustainable
- Limits to growth
- High exposure to natural resource-related risks

- Transformational increase in resource productivity
- Growth decoupled from resources
- Balanced portfolio of lifecycle revenues

$4 500 billion
Global growth potential to 2030

60 - 85%
Reduced environmental footprint

Up to 7x
Higher value in lifecycle revenues vs. new sales

Up to 100%
Reduced exposure to critical raw material

1/3
Of global CEOs already explore circular economy business models
Accenture has studied over 500 successful circular pioneers

50 Executive Interviews  500+ Case Studies

5 Business Models
- Circular Supply-Chain
- Recovery & Recycling
- Product Life-Extension
- Sharing Platform
- Product as a Service

5 Capability Shifts
- Strategy
- Innovation & product development
- Sourcing and manufacturing
- Sales & product use
- Return chains

10 Enabling Technologies
- Life & Material sciences
- Social
- Modular design technology
- M2M Communication
- Cloud
- 3D Printing
- Analytics
- Trace and return systems
- Mobile
- Advanced recycling tech
At the core of the solution lie five circular economy business models

Business models of the circular economy

**Circular Supply-Chain**
Develop and supply renewable and/or fully recyclable input material to replace e.g. virgin synthetic fibers.

**Recovery & Recycling**
Recover useful resources from disposed products and put back into production through return chain, reprocessing and re/upcycling.

**Sharing Platform**
Drive up utilization rate of products by making possible shared use / access / ownership.

**Product as a Service**
Offer product access rather than ownership where supplier take responsibility for product lifecycle management.

**Product Life-Extension**
Extend working life of products through repairs, maintenance, second hand, donations, etc.

The Circular Economy transformation implies moving business focus from the line to the ‘cascades’

Strategic imperative

Traditional growth focus
Typically 80-90% of business

Circular growth focus
Rarely managed strategically

Extraction  Material processing  Production  Assembly  Sales  Collection  Disposal

Use

Share

Replenish

Repurpose

Reuse

Recover

Repair

Restore

Resell

Refurbish

Remanufacture

Recycle & Upcycle

Renewable inputs

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Stakeholders struggle with different questions

Typical questions on clients’ minds...

**Chief Executive Officer:** How can I begin to transform the company today to ensure long term competitive positioning in a changing global market?

**Chief Supply Chain Officer:** How can I reduce my input resource costs and make my supply chain more resilient and lower risk?

**Chief Operations Officer:** How can I design and manufacture products which reduce resource need and create an upside from production waste?

**Chief Strategy Officer:** How do I find new innovative business models to drive growth and create competitive advantage over my rivals?

**Sales Director:** How can I continuously improve the customer value proposition to increase revenue?
Five major shifts in business capabilities are critical to deliver the circular economy business models successfully.

Circular economy capability shifts

Innovation & Product Development

From designing for single use to **designing for many life cycles and users**

Sourcing & Manufacturing

From homogenous supply chain to **heterogeneous resource flow innovation and cascading**

Return Chains

From compliance to **opportunity driven take-back**

Sales & Product Use

From never seeing your product again to **customer and asset life cycle management**

Strategy

From focus only on core business to **manage complex and collaborative circular networks**
Ten supporting technologies are maturing fast and provide concrete benefits to enable circular economy businesses

10 Technologies for disruption

- **Digital**
  Enabling entirely new ways to access and understand product use-phase and aid customers in use efficiency

- **Hybrid**
  Enabling moving physical objects back and forth from value chains with digital services to drive down cost

- **Engineering**
  Enabling production and supply of new types of resources as well as new product designs to use them
Gaining the circular advantage

1. Map out a circular economy strategy and determine where to position the business in the value chain.

How can circular value be maximized?

Where can the company best utilize its capabilities to outcompete others?
Gaining the circular advantage

Create the right ecosystem, allying with leaders from other industries.

Jaguar Land Rover + aluminum recycling giant Novelis

- Vehicles designed to utilize aluminum more effectively
- Manufacturing processes minimize waste
- Built-in recycling processes for products at end-of-life

Ford + global food manufacturer Kraft Heinz

Collaboration to develop new component parts based on food waste—tomato skins
Gaining the circular advantage

Put the customer at the centre

3

Embrace circular
Continuous customer engagement can mean major organizational and operational changes

Establish trust
Build relationships with customers to maximize a product’s utility across its lifecycle, and encouraging responsible return or disposal at the end of a product’s life

Enabled after-sale service
Proactively manage a products’ lifecycle – keep track of assets, optimize performance/return, and measure the product’s impact
Gaining the circular advantage

Combine circular business models

Vehicle Design, Manufacturing/Distribution + Product as a Service + Product Life Extension = 14% potential cost base reduction

$400 - $600 billion by 2030 = potential revenue for automotive companies from selected circular economy business models
Gaining the circular advantage

5

Start small and join the dots

Impact

Time

Learning

Changing

Leading

- Isolated pilots
- Low commercial value
- Challenge conventions
- Co-ordinated learnings
- Unique value contribution
- Conflict of interest
- Full lifecycle offer
- Reformed value proposition
- New culture

#WasteToWealth
Conclusion

$4.5 trillion size of prize through …

5 Business models

10 enabling technologies

5 capability shifts