The EC3 tool is about more than quantifying embodied carbon...
It’s changing the way we work with our design teams.
Perkins and Will and Webcor are using the Newark Civic Center in Newark, CA as a case study to pilot the EC3 Tool. We are also working with Sellen to test the EC3 Tool on The Hub, an office campus Mountlake Terrace, WA.
Informing our decisions about supply chain.

We’re comparing methods to gather takeoffs for the EC3 Tool & collaborating to establish a process for low-carbon materials procurement.

**Some options for inputting takeoffs:**

**BIM 360 direct import:**
- EC02e at a glance

**Tally analysis + import:**
- LCA + embodied carbon procurement

**Direct input from takeoffs**
- Recommended best practice

The Hub.
Reducing Embodied Carbon

Takeoffs:
Import from
BIM 360

Perkins&Will
Reducing Embodied Carbon

Takeoffs:
Import from
Tally Analysis

Perkins&Will
Concrete Mix Refinement:
Collaborate with contractor, subs & local plants to optimize mixes

The timber industry:
Procure certified lumber, reach out to local mills to request EPD’s, & perform Life Cycle Assessment for impact comparison

Alternative & recycled options:
Use EC3 to find lower carbon products, compile info from spec. writers, designers, & researchers

Market transformation
Select materials with Environmental Product Declarations; contact manufacturers to request increased transparency and share-back procurement success stories

Perkins&Will
Informing our decisions about material selection.

We’re using these takeoffs to better understand the embodied carbon content of our projects’ materials and assessing how the EC3 Tool can influence design on future projects.

Some options for specification:

- Establish a different dialogue from the get-go
- Bid out & procure from responses
- Procure specific materials and provide alts
- Require EPD's
- Set EC02e thresholds
Materials Procurement as a Linear Process
Low-Carbon Procurement as an Iterative Process

Design Team:
- Consider adaptation & re-use
- Determine structural materials
- Streamline design & assemblies
- Establish quantities

Specs

CO2e

EC3 Tool

A5 - Installation
- Carbon-smart procurement findings support future work
- Market transformation...

A1-A3 Cradle to Gate
- Extraction of materials
- Transport to/between plants
- Processing & manufacturing

Context

Source

Feedback
- Rest of life cycle

Perkins & Will
Next Steps

- Establish an embodied carbon working group
- Case studies and benchmarking
- Work EC02e metrics into our existing sustainability goals
- Develop a workflow manual through comparative analysis