



**BUILD WITH STRENGTH**

A COALITION OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION

# Athena Institute EPD Tool

# Progress: EPD Tools

- **Athena**
  - Customized, plant specific calculator
- Climate Earth
  - Links Command Alkon production software with Climate Earth environmental impact data
- Quantis / PCA tool
  - Launched August 2016



# Athena's EPD Service Offering



## EPD Service for ready-mixed concrete

- Developed a regionalized LCA/EPD Calculator tool to:
  - Streamline the EPD process
  - Provide cost effective solution
  - Added-value with “customer focused” attributes – auto benchmarking
- Tool based on NRMCA EPD v1 & v2
  - Incorporates previously verified data
- Easily set-up for a single plant or company with multiple plants in varying regions
- Can be further customized for vertically integrated companies – specific cement and/or quarry operation supply-chains

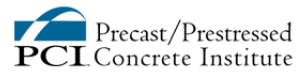
## About the Institute

- Non-profit LCA consultancy and think tank.
- North American leader in construction-sector LCA.
- Working with forward-looking industries to measure and reduce their product footprints.
- Providing free software tools to architects and engineers, to reduce the footprint of buildings and roadways.
- Fee for service consulting:
  - LCAs, PCRs and EPD services
  - Verification services for EPD Program Operators
  - Life cycle policy analysis





# Other Cement and Concrete EPDs





# Our EPD service process...

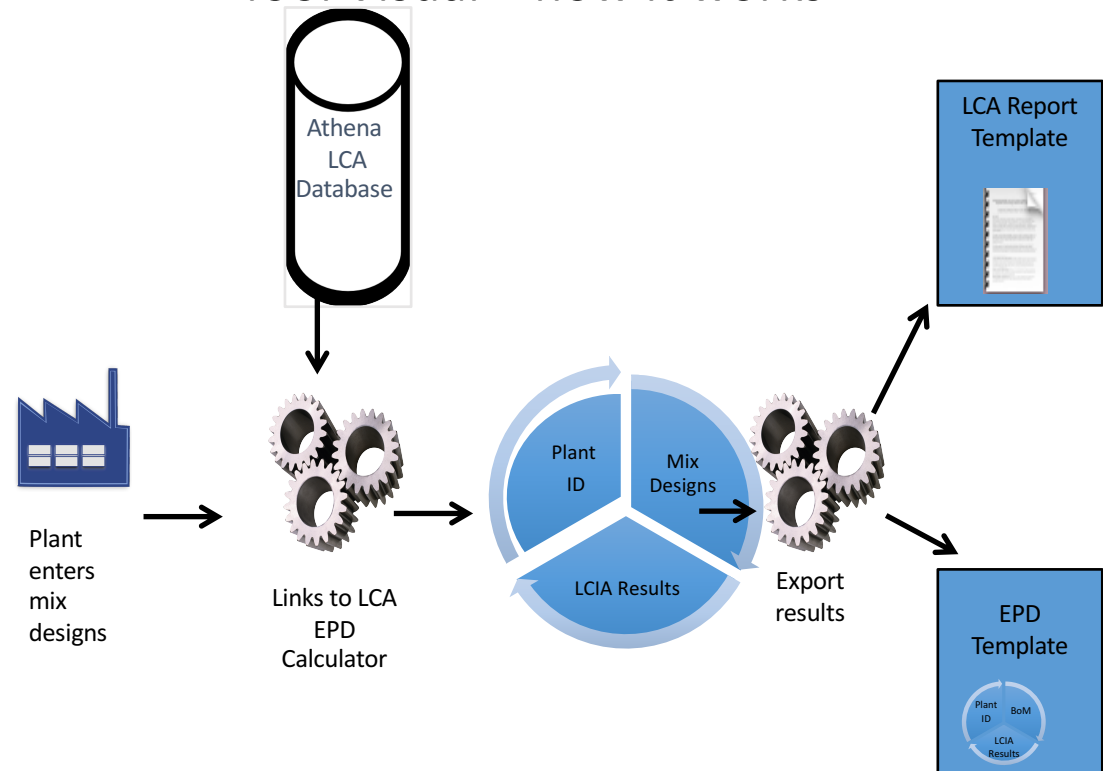


**Athena**  
Sustainable Materials  
**Institute**

## Institute sets-up your LCA/EPD tool

- If we already have your plant operating data, simple process....
- You enter the mix designs you want in your EPD
- We complete your initial LCA & EPD
- We facilitate 3<sup>rd</sup>-party verification of your LCA, EPD Calculator tool & EPD
- Now have company/plant specific EPD and verified EPD tool
- Thereafter we maintain your tool, but you can generate additional EPDs without the Institute via calculator tool & EPD template
- *Brief tool demo.....*

## Tool Visual – how it works



# LCA EPD Results Calculator for NRMCA Members

## Summary

- Customized tool for each company and plant(s)
  - Supply-chain specific cement and aggregates data can be added
- With Maintenance agreement - background data updated annually
- NRMCA members can:
  - Enter and analyze any mix design and generate EPD results
  - Compare these to NRMCA regional industry average benchmarks – identify “hotspots”
  - Demonstrate to customers how various mix designs can contribute to LEEDv4 credits
  - Share the results with your customers and provide “optimization credit” documentation
  - Create supplemental EPDs on their own in conjunction with the EPD Program Operator



# \$'s – what it all costs

Process steps	US\$
1) Deliver company/plant specific LCA/EPD Tool If we have your plant(s) data already If we need to collect your plant data	\$150/plant \$300/plant
2) Complete company specific LCA background report and EPD (up to 50 mixes per plant)	\$8,000/1 <sup>st</sup> plant \$1,000/additional plant
Anticipated LCA, EPD and Tool verification cost – paid to EPD PO (e.g., 3 plants x 50 mixes per plant – 150 mix designs)	\$4,000/150 = \$27/mix design
Total Cost - 1 plant with 50 mix designs – verified EPD and Tool Total Cost - 3 plants with 50 mixes per plant – verified EPD and Tool	~ \$12,000 ~ \$14,000
3) Annual tool maintenance cost	\$125/plant
4) Generate supplementary mix design EPDs based on verified tool	\$0
Anticipated supplementary EPD verification cost based on verified tool (based on 3 plants and 30 mix designs/plant = 90 mix designs)	\$1250/90 = \$14/mix design
Note: verification costs estimated using NRMCA fee schedule	May vary



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Questions?



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