

case study:

# LOREN COOK COMPANY

## Need:

### Web application for engineers and sales representative for custom configurations

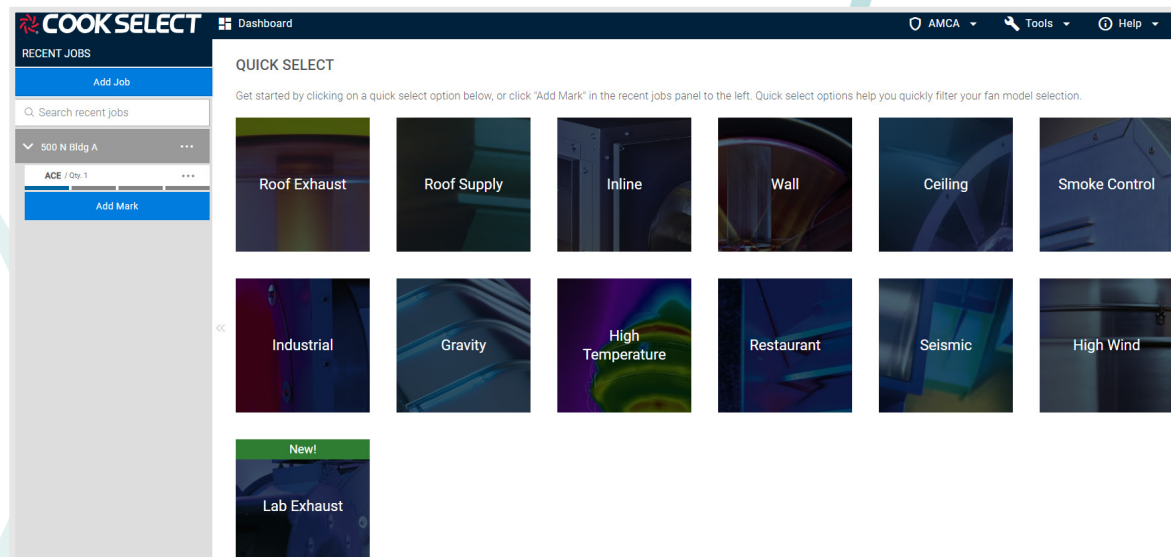
Loren Cook Company, a ventilation and air movement company specializing in custom air handling systems, needed a web application that allowed their engineers and sales representative to define ventilation conditions for single- and multi-fan systems of practically any size. The system helps the user select from a range of customized system configurations that meet specific installation requirements.

## Solution:

Code Scientists developed CookSelect, which you can browse at [CookSelect.LorenCook.com](http://CookSelect.LorenCook.com). We played a key role in identifying performance and framework optimizations, architectural improvements, project process improvements, and user experience enhancements.

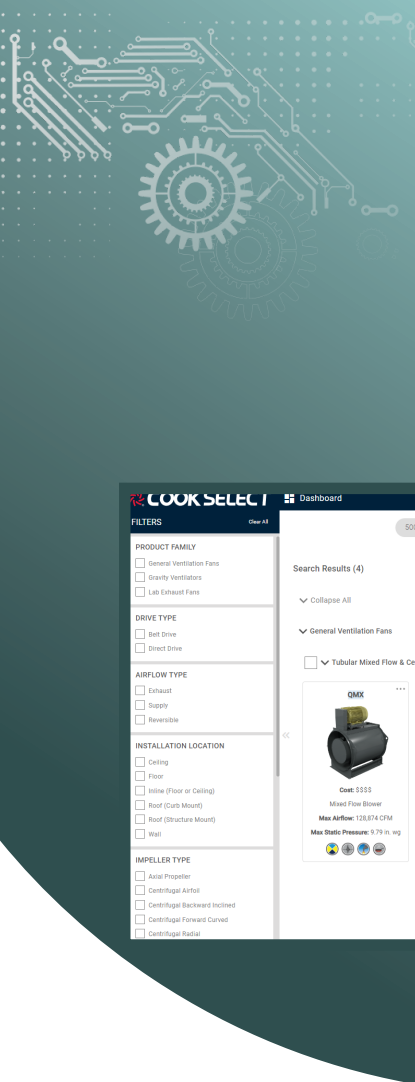
## Skills used:

- Angular, RxJS, and NgRx
- C#, SignalR, and LINQ
- Azure, Azure DevOps, and Azure Message Bus



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**Code Scientists** is a software development firm specializing in web applications, web services, and internet-enabled devices for companies with complex processes. We provide human-to-technology and technology-to-technology interface solutions.



COOK SELECT

Dashboard

AMCA

Tools

Help

Guest

500 N Bldg A

ACE

1 Model Selection

2 Design Conditions

3 Unit Selection

4 Unit Configuration

Search products

PRODUCT FAMILY

☐ General Ventilation Fans

☐ Gravity Ventilators

☐ Lab Exhaust Fans

DRIVE TYPE

☐ Belt Drive

☐ Direct Drive

AIRFLOW TYPE

☐ Exhaust

☐ Supply

☐ Reversible

INSTALLATION LOCATION

☐ Ceiling

☐ Floor

☐ Inline (Floor or Ceiling)

☐ Roof (Curb Mount)

☐ Roof (Structure Mount)

☐ Wall

IMPELLER TYPE

DB

Cost: \$55

Inline Duct Blower/Cabinet Fan w/EC Motor

Max Airflow: 9,900 CFM

Max Static Pressure: 1.8 in. wg

DEX

Cost: \$55

Inline Duct Blower/Cabinet Fan w/External Motor

Max Airflow: 9,900 CFM

Max Static Pressure: 2.6 in. wg

GC

Cost: \$

Gemini Centrifugal Ceiling-Wall Cabinet Fan

Max Airflow: 3,555 CFM

Max Static Pressure: 1.47 in. wg

GN

Cost: \$

Gemini Centrifugal Inline Cabinet Fan

Max Airflow: 3,555 CFM

Max Static Pressure: 1.47 in. wg

SDB

Cost: \$55

Inline Duct Blower/Cabinet Fan w/EC Motor

Max Airflow: 13,112 CFM

Max Static Pressure: 4.12 in. wg

INFORMATION

SELECTED MODEL

Please make a selection.

COOK SELECT

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ACE

1 Model Selection

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Search Results (4)

Search

General Ventilation Fans

☐ Gravity Ventilators

☐ Lab Exhaust Fans

DRIVE TYPE

☐ Belt Drive

☐ Direct Drive

AIRFLOW TYPE

☐ Exhaust

☐ Supply

☐ Reversible

INSTALLATION LOCATION

☐ Ceiling

☐ Floor

☐ Inline (Floor or Ceiling)

☐ Roof (Curb Mount)

☐ Roof (Structure Mount)

☐ Wall

IMPELLER TYPE

☐ Axial Propeller

☐ Centrifugal Axial

☐ Centrifugal Backward Inclined

☐ Centrifugal Forward Curved

☐ Centrifugal Radial

QMX

Cost: \$555

Mixed Flow Blower

Max Airflow: 135,874 CFM

Max Static Pressure: 9.79 in. wg

QMXE

Cost: \$555

Mixed Flow Roof Mounted Exhaust Blower

Max Airflow: 31,563 CFM

Max Static Pressure: 9.03 in. wg

QMXS

Cost: \$555

Mixed Flow Roof Mounted Supply Blower

Max Airflow: 31,563 CFM

Max Static Pressure: 9.03 in. wg

QMXU

Cost: \$555

Mixed Flow Upblast Blower

Max Airflow: 125,924 CFM

Max Static Pressure: 9.03 in. wg

INFORMATION

SELECTED MODEL

Please make a selection.

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ACE

1 Model Selection

2 Design Conditions

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4 Unit Configuration

DESIGN CONDITIONS

Airflow (CFM) \*

Static Pressure (in. wg) \*

Altitude (ft) \*

Airstream Temperature (°F) \*

1000

0

0

70

ADVANCED INPUTS

Drive Loss \*

Medium

This condition applies to ACEB

INFORMATION

SELECTED MODEL

Please make a selection.

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500 N Bldg A

ACE

1 Model Selection

2 Design Conditions

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4 Unit Configuration

Reset Grid Preferences

Show Unselected

Unit Name	Drive Type	Speed Control	Wall Flow Controls	Single/Drive	Airflow (CFM)	Static Pressure (in. wg)	Nominal Impeller Size (in)	Drive Loss	Break hp	Motor hp	Hz	Fan Speed (RPM)	Motor Speed (RPM)	Max Fan Speed (RPM)	Max Speed with Current Motor (RPM)	Motor Sp
100 ACEB	Belt Drive	None			1,000	0.250	12.0	17%	0.227	0.333	—	1930	1725	2013	2013	—
120 ACEB	Belt Drive	None			1,000	0.250	12.0	18%	0.114	0.167	—	1108	1725	1669	1258	—
120 ACEB ORR1	Belt Drive	None			1,000	0.250	12.0	16%	0.260	0.333	—	1470	1725	1669	1987	—
120 ACEB ORR2	Belt Drive	None			1,000	0.250	12.0	18%	0.146	0.167	—	1108	1725	1669	1158	—
135 ACEB	Belt Drive	None			1,000	0.250	13.5	19%	0.091	0.167	—	839	1725	1574	1027	—
135 ACEB ORR1	Belt Drive	None			1,000	0.250	13.5	15%	0.337	0.500	—	1431	1725	1574	1574	—
135 ACEB ORR2	Belt Drive	None			1,000	0.250	13.5	17%	0.114	0.333	—	1101	1725	1574	1244	—
120 ACEB	Belt Drive	VFD			1,000	0.250	12.0	18%	0.114	0.333	42	1108	1725	1669	1584	—
120 ACEB ORR1	Belt Drive	VFD			1,000	0.250	12.0	16%	0.260	0.333	55	1470	1725	1669	1987	—
120 ACEB ORR2	Belt Drive	VFD			1,000	0.250	12.0	18%	0.146	0.333	46	1108	1725	1669	1469	—
135 ACEB	Belt Drive	VFD			1,000	0.250	13.5	19%	0.091	0.333	39	839	1725	1574	1293	—
135 ACEB ORR1	Belt Drive	VFD			1,000	0.250	13.5	15%	0.337	0.500	55	1431	1725	1574	1574	—
135 ACEB ORR2	Belt Drive	VFD			1,000	0.250	13.5	17%	0.188	0.333	90	1111	1725	1574	1345	—
120C170 ORR1	Direct Drive	None			1,174	0.344	12.0	—	0.361	0.500	—	1725	1725	1725	—	—
120C130	Direct Drive	None			1,173	0.344	12.0	—	0.155	0.250	—	1300	1300	1300	—	—
120C110	Direct Drive	None			1,029	0.264	12.0	—	0.105	0.167	—	1140	1140	1140	—	—
120C110 ORR2	Direct Drive	None			1,029	0.265	12.0	—	0.135	0.167	—	1140	1140	1140	—	—
135C170 ORR1	Direct Drive	None			1,256	0.363	13.5	—	0.513	0.750	—	1725	1725	1725	—	—
135C110 ORR2	Direct Drive	None			1,029	0.265	12.0	—	0.135	0.167	—	1140	1140	1140	—	—
135C110	Direct Drive	None			1,029	0.265	12.0	—	0.135	0.167	—	1140	1140	1140	—	—

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500 N Bldg A

ACE

1 Model Selection

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Motor Specification

115 (110-125) 60HZ 1PH AC, 0.3333 HP, ODP

Summary

Selected Model

135 ACEB ORR2

Motor Specification

115 (110-125) 60HZ 1PH AC, 0.3333 HP, ODP

Schedule

INFORMATION

SELECTED MODEL

135 ACEB ORR2

DESIGN CONDITIONS

Airflow: 1000 CFM

Static Pressure: 0.250 in. wg

Altitude: 0 ft

Airstream Temperature: 70 °F

PERFORMANCE

PRODUCT & AMCA INFORMATION

CURVES

