

## CASE STUDY - AUDI

**PROBLEM:** The Audi TT has a new dashboard and controls layout. The 'Audi MMI' is a revolutionary improvement - a brand new way to access all the features. By the time dealerships receive new car shipments, employees must be fully familiar with the re-designed controls and that includes – technicians, brand specialists, service managers and consultants and shop foremen. This is a 'Chicken & Egg' problem since they can't actually touch the cars before they arrive. The nationwide training task was estimated to cost about \$2.52 Million (*see next page*).

**SOLUTION:** Heartwood developed a 3D Interactive Virtual Cockpit iPad App that replicates the real car controls. Dealership employees interact with the virtual cockpit, MMI and steering wheel controls using their fingers on iPads as if they are actually in the car.

[Click here](#) to see the application in action.



### EXPECTED RESULTS:

1. Dealerships will be familiarized with the new virtual cockpit, MMI and steering wheel controls prior to receiving the actual cars.
2. The Training Apps will help certify 270 technicians, and train over 7,000 dealership employees efficiently.

### EXPECTED BENEFITS:

1. Train nationwide staff in 22-26% less time - reducing direct training costs.
2. Projected savings of \$600K – *see next page for a Three-Step Business case analysis.*

**PROJECT STATUS:** The Audi TT Virtual Cockpit Training App was a success! – and Audi signed on for development of 3D Interactive Training Apps for the 2017 Q7 model.

*"Heartwood has done a great job on our Audi Virtual Cockpit project. They walked myself and couple other team members through the App and everyone was very impressed by it. We're getting ready for our Train-the-Trainer on the TT in a few weeks, so this App is right on schedule. Please thank the team for a job well done!"*

-Manager, Technical and Collision Training, Audi



## THREE-STEP BUSINESS CASE

### STEP 1: Measuring the Problem in \$

*Note: the calculations below have been condensed for sake of brevity.*

AUDI Virtual Cockpit Training Task					
Dealership Employee	Per Dealership	Dealerships (USA)	Total Emp.	Training Hrs. (on this task)	Training Hrs.
<b>Technicians</b>					
Mandatory Certification	1	270	270	12	3,240
Familiarization only	8	270	2,160	4	8,640
<b>Sales- Consultants &amp; Managers</b>					
Familiarization only	11	270	2,970	4	11,880
<b>Misc- Service Consultants, Managers, and Shop Foremen</b>					
Familiarization only	6	270	1,485	4	5,940
					29,700
Average Blended Burdened Cost/hr \$ Magnitude of Training Task					\$85 <b>\$2,524,500</b>

### STEP 2 – Finding the Value

The Virtual Cockpit Training App using 3D interactivity would save around 22-26% teaching and learning time for students to master the subject (vs. using passive e-learning and PowerPoint) – reducing the training cost from \$2.52MM to \$1.92MM.

### STEP 3 – Determining the Investment

The value of a solution and appropriate investment to obtain it can be expressed with two equations:

Cost of problem (COP) – minus Return on solution (ROS) = Value

Value x Customers expected Return on Investment (ROI) = Justified Investment

In Audi's case:

\$2.52MM (COP) – \$1.92MM (ROS) = \$600,000 (Value)

Assuming a desired ROI of 6 times the initial investment,

\$600,000 x 1/6 = **\$100,000** as the Justified Investment for the **Virtual Cockpit Training App**.

