

NAME _____

Due:

Points: ____ / 20 (Assessments)

House of Quality Construction, Step 02 (using Survey results)

Read chapter 6 from the reference text. Focus on the QFD / HOUSE of QUALITY Steps

Begin construction of a House of Quality (HoQ) for your design problem (getting from state A to state B). As the initial build, digital (printed) or hand-written (on existing template) submission is acceptable. Anticipate full digital version requirement (you will present your HoQ and include in FUNCTIONAL / ENGINEERING SPECIFICATIONS formal report).

Chapter 6. Complete Steps 2, 3, and 4 of your House of Quality build.

Recall:

Step 1: Identify the Customers, Who Are They?

(Complete, with Survey and Survey Submission (Homework_01))

Step 2: Determine the Customers' Requirements: **WHAT** do the Customers Want?
(Use Survey Results).

Step 3: Determine Relative Importance of the Requirements: **WHO vs WHAT**
(use fixed sum method, $\Sigma=100$).

Recommend you solicit feedback for this step also. A formal survey is not required, however, use classmates, professors, colleagues, friends, family, consumers, etc.

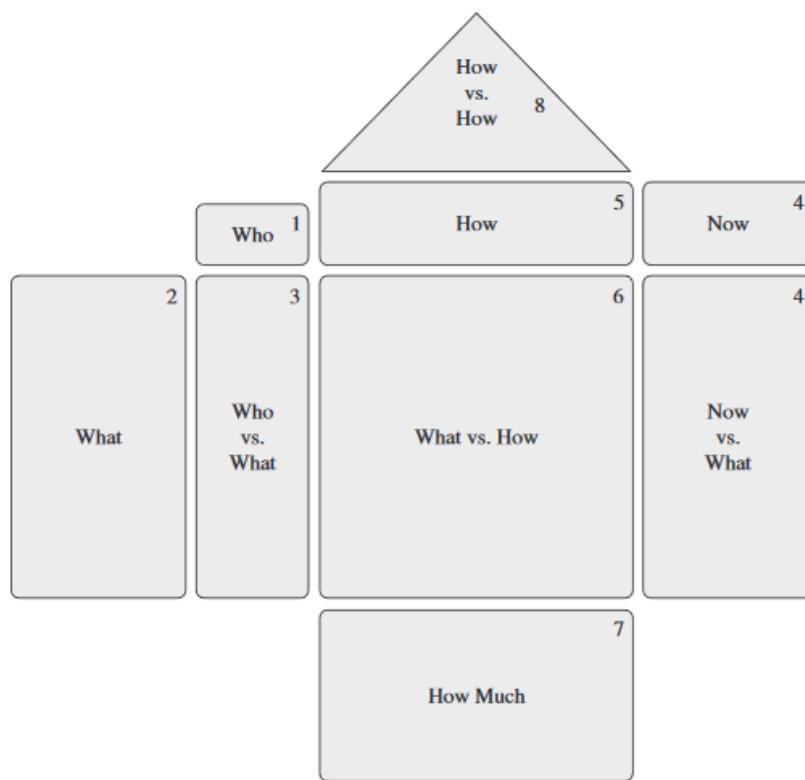
REQUIRED- SOLICIT the INSTRUCTOR ... via email, ask weighting advice on a few applicable requirements (as the Instructor customer) Customer feedbacks (i.e., the Instructor considers the viewpoint as a Customer).

Step 4: Identify and Evaluate the Competition (**NOW**): How satisfied are the Customers Now?
(Competitor Benchmarking) **NOW vs WHAT**. Depending on your project, this may be peers.
The internet (forums / reviews) are also possibilities. Research. Survey

Completion of these steps will build the “west wing and east wing” of your HoQ (your “left” and “right” rooms). See reverse for examples (from handout).

Understand the HoQ will be an iterative process. Several revisions will occur.

Note: Review Table 6.1 ... “Customers” is a broad term. You must meet regulatory requirements. If you’re designing a better George Foreman Grill, it should be UL Listed. If you’re designing a new artificial heart, you need FDA approval.



1 = very bad
5 = very good

► Colub
■ Deltor
△ Delta

Who	How	Now	
Passenger	Agent		
↑ % steps	N N N N sec N N	1 2 3 4 5	
Seat width relative to frame width Steps to adjust seat height Force to adjust seat height Force to lift 65% male passenger Lifting force required for agent Push truck over 2 cm bump Force to push seat chair Time to transfer between seats Forward tipping force at handles Side tipping force at handles			
What			
Transfer from personal to aisle chair	Easy positioning of seat height Easy to position chairs Minimum effort for all Good lifting position Minimum time for transfer	4 4 ○ ○ 6 10 ○ 15 10 ○ ○ 10 12 ○ 3 14 △	1 2 3 4 5 ▷ ■ ▷ ■ ■ ▷ ▷ ■ ▷ ■ ▷ ■ ▷ ■ ▷ ■
Aisle chair movement	Easy to move Fits in aircraft aisle Good stability	7 8 - - 24 10	○ ○ ○ ○ ■ ▷ ■
Transfer from aisle chair to seat	Aisle chair close to seat Easy positioning of seat height Minimum effort for all Minimum transfer time	6 2 ○ 5 8 ○ ○ 15 12 ○ ○ 5 10 △	▷ ■ ▷ ■ ▷ ■ ▷ ■
Importance (Passenger) 10 9 8 9 9 4 14 5 16 16 (Agent) 11 13 11 7 7 5 14 16 8 8 Colub 85 2 3 20 15 11 7 15 20 15 Deltor 87 3 5 27 25 22 15 18 15 10 Target (Delighted) 90 1 2 20 10 8 7 15 15 10 Threshold (Disgusted) 85 2 4 25 15 12 10 18 20 12			