

Project:  
Revision:  
Date:

THE FLYING TOASTERS

TEAM 3641

# QFD

## House of Quality

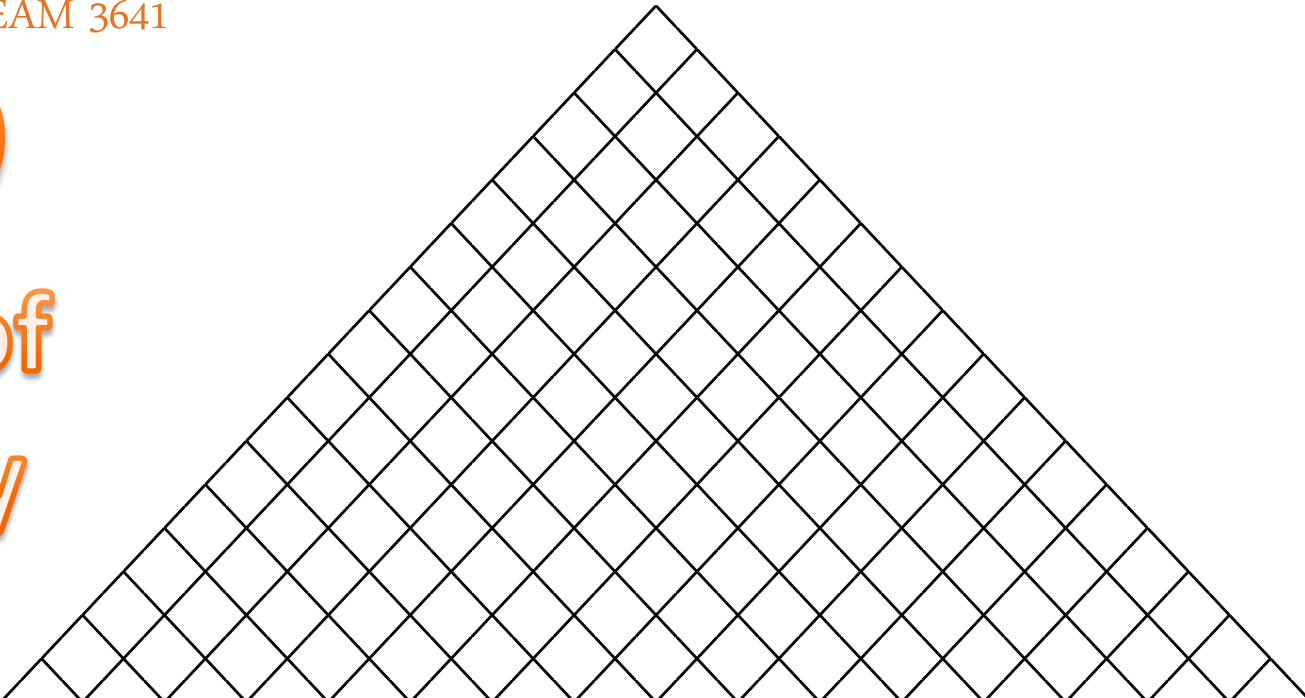
| Correlations   |   |
|----------------|---|
| Positive       | + |
| Negative       | - |
| No Correlation |   |

| Relationships |   |
|---------------|---|
| Strong        | ● |
| Moderate      | ○ |
| Weak          | ▽ |

| Direction of Improvement |   |
|--------------------------|---|
| Maximize                 | ▲ |
| Target                   | ◇ |
| Minimize                 | ▼ |



| Row # | Weight Chart (Calculated) | Relative Weight (calculated) | Strategic Importance (Team Sets 1-5) | Max Relationship (Red is Negative) | Direction of Improvement (Rev. only) | Column # | 1  | 2                   | 3              | 4           | 5                 | 6       | 7        | 8             | 9                 | 10              | 11                | 12                  | 13           | 14                   | 15                    | 16              | 17                  | 18      |            |
|-------|---------------------------|------------------------------|--------------------------------------|------------------------------------|--------------------------------------|----------|--|---------------------|----------------|-------------|-------------------|---------|----------|---------------|-------------------|-----------------|-------------------|---------------------|--------------|----------------------|-----------------------|-----------------|---------------------|---------|------------|
|       |                           |                              |                                      |                                    |                                      |          | Scoring Opportunities & Necessary Attributes (Explicit and Implicit) | Pushability - robot | Manuverability | Drive Speed | Center of Gravity | Catcher | Launcher | Floor Pick-up | High Goal Blocker | Bulldozer -ball | Auton Auto Target | Auton Timed Control | Ball Ejector | Dead Rocgning-Camera | Vision-Auto Targeting | Distance Sensor | Auton Light Sensing | Hopper  | Durability |
| 1     |                           | 0%                           |                                      |                                    |                                      |          |  |                     |                |             |                   |         |          |               |                   |                 |                   |                     |              |                      |                       |                 |                     |         |            |
| 2     | █                         | 4%                           | 3                                    | 9                                  |                                      |          | Auton multi ball   | ●                   | ●              | ○           |                   | ●       | ●        |               | ○                 | ●               | ●                 |                     |              |                      | ●                     | ●               | ●                   | ●       |            |
| 3     | █                         | 7%                           | 5                                    | 9                                  |                                      |          | Auton Move Forward   |                     | ▽              | ●           | ▽                 |         |          |               |                   |                 | ●                 |                     |              |                      |                       | ▽               |                     |         |            |
| 4     | █                         | 7%                           | 5                                    | 9                                  |                                      |          | Auton High Goal  | ●                   | ●              | ▽           |                   | ●       |          |               |                   | ●               | ●                 |                     |              |                      | ●                     | ●               |                     | ▽       |            |
| 5     | █                         | 7%                           | 5                                    | 9                                  |                                      |          | Auton Low Goal   | ●                   | ●              | ▽           |                   | ▽       |          |               | ●                 | ●               | ●                 |                     |              |                      | ●                     | ●               |                     |         |            |
| 6     | █                         | 4%                           | 3                                    | 9                                  |                                      |          | Auton Hot Goal   | ●                   | ●              | ▽           |                   | ●       |          |               | ○                 | ●               |                   |                     |              |                      | ●                     | ●               | ●                   | ▽       |            |
| 7     | █                         | 7%                           | 5                                    | 9                                  |                                      |          | Throw Over Truss   | ○                   | ○              | ▽           |                   | ●       |          |               |                   |                 |                   |                     |              | ●                    |                       | ●               |                     | ▽       |            |
| 8     | █                         | 6%                           | 4                                    | 9                                  |                                      |          | Catch a Ball   | ○                   | ●              | ○           | ●                 |         |          |               |                   |                 |                   |                     |              | ●                    | ▽                     | ▽               |                     | ▽       | ●          |
| 9     | █                         | 7%                           | 5                                    | 9                                  |                                      |          | Launch High Goal   | ○                   | ●              | ●           |                   | ●       |          |               |                   |                 |                   |                     |              | ●                    | ●                     | ●               |                     |         |            |
| 10    | █                         | 4%                           | 3                                    | 9                                  |                                      |          | Low Goal   | ●                   | ●              | ●           |                   | ○       |          |               | ●                 |                 |                   |                     |              | ●                    | ▽                     | ▽               |                     |         | ●          |
| 11    | █                         | 7%                           | 5                                    | 9                                  |                                      |          | 2nd Assist   | ●                   | ●              | ●           |                   | ▽       | ▽        | ●             | ●                 |                 |                   |                     |              | ●                    |                       | ▽               |                     | ○       | ●          |
| 12    | █                         | 6%                           | 4                                    | 9                                  |                                      |          | 3rd Assist   | ●                   | ●              | ●           |                   | ▽       |          | ●             | ●                 |                 |                   |                     |              | ●                    |                       | ▽               |                     | ○       | ●          |
| 13    |                           | 0%                           |                                      | 9                                  |                                      |          | Possesing Other Team ball  |                     | ○              | ▽           |                   | ▽       | ▽        |               |                   |                 |                   |                     | ●            |                      |                       |                 |                     | ▽       | ▽          |
| 14    | █                         | 4%                           | 3                                    | 9                                  |                                      |          | Defense of high goal   | ●                   | ●              | ●           | ●                 |         |          |               | ●                 |                 |                   |                     | ▽            |                      | ▽                     |                 |                     |         | ●          |
| 15    | █                         | 4%                           | 3                                    | 9                                  |                                      |          | Defense of low goal  | ●                   | ●              | ●           | ○                 |         |          |               |                   |                 |                   |                     | ▽            |                      |                       |                 |                     |         | ●          |
| 15    | █                         | 4%                           | 3                                    | 9                                  |                                      |          | Defense-Auton Goal Zone  | ○                   | ●              | ●           | ●                 |         |          |               | ●                 |                 |                   |                     | ▽            |                      | ▽                     | ○               | ▽                   |         | ●          |
| 15    | █                         | 6%                           | 4                                    | 9                                  |                                      |          | Pushing  | ●                   | ●              | ●           | ●                 |         |          |               |                   |                 |                   |                     |              |                      |                       |                 |                     |         | ●          |
| 15    |                           | 0%                           |                                      | 9                                  |                                      |          | 20" Extension  |                     |                |             |                   | ●       | ●        | ●             | ▽                 |                 |                   |                     | ▽            |                      |                       |                 |                     | ●       | ●          |
| 15    | █                         | 7%                           | 5                                    | 9                                  |                                      |          | Human Player Loading   | ●                   | ●              | ○           |                   | ●       |          | ●             | ●                 |                 |                   |                     |              |                      |                       |                 |                     | ●       | ●          |
| 15    | █                         | 4%                           | 3                                    | 9                                  |                                      |          | Human Player Passing   | ●                   | ●              | ○           |                   | ●       | ●        | ●             | ●                 |                 |                   |                     |              |                      |                       |                 |                     | ●       | ●          |
| 16    | █                         | 3%                           | 2                                    | 9                                  |                                      |          | Goallie 6" cylindrial Height   | ●                   | ●              | ●           | ●                 |         |          |               | ●                 |                 |                   |                     | ▽            |                      | ▽                     |                 |                     |         | ●          |
|       |                           |                              |                                      |                                    |                                      |          | Target (What we want)  |                     |                |             |                   |         |          |               |                   |                 |                   |                     |              |                      |                       |                 |                     |         |            |
|       |                           |                              |                                      |                                    |                                      |          | Max Relationship (Red is Negative)                                   | 9                   | 9              | 9           | 9                 | 9       | 9        | 9             | 9                 | 9               | 9                 | 9                   | 9            | 9                    | 9                     | 9               | 9                   | 9       | 9          |
|       |                           |                              |                                      |                                    |                                      |          | Difficulty Rating (Impact vs. Effort)<br>5=High impact/Little effort | 2                   | 3              | 4           | 3                 |         |          |               |                   |                 |                   |                     |              |                      |                       |                 |                     |         |            |
|       |                           |                              |                                      |                                    |                                      |          | Technical Importance Rating  | 4.8429              | 8              | 7.7429      | 2.2286            | 1.6714  | 3.3571   | 2.5714        | 1.0286            | 3.4714          | 2.0571            | 2.3143              | 0.1571       | 3.3429               | 2.9143                | 3.7714          | 0.8143              | 2.04286 | 5.0143     |
|       |                           |                              |                                      |                                    |                                      |          | Relative Weight  | 10%                 | 16%            | 15%         | 4%                | 3%      | 7%       | 5%            | 2%                | 7%              | 4%                | 5%                  | 0%           | 7%                   | 6%                    | 8%              | 2%                  | 4%      | 10%        |
|       |                           |                              |                                      |                                    |                                      |          | Weight Chart   | █                   | █              | █           | █                 | █       | █        | █             | █                 | █               | █                 | █                   | █            | █                    | █                     | █               | █                   | █       | █          |

