Frequently Asked Questions

The Simulator

What does “Delta” mean?
Delta is the change between the baseline budget and a user’s new budget over the next five years. These show on the budget and summary pages, where users can see a “Baseline budget,” “Delta,” and “New budget.” The baseline is the total projected budget for the Department of Defense over the next five years.

Why isn’t a platform I am looking for in the simulator?
For various reasons, the Defense Futures Simulator team does not include all systems in the simulator. An option may not have been included because we were unable to find reliable costing data for it, or because it might not have a major impact on the overall budget. However, we are constantly updating and improving the simulator, so please send us options and associated data sources if you would like us to consider adding new systems. Users can contact us at defensefutures@aei.org.

Can I save my results?
On the results page, there is an option at the bottom to “Download Results.” This produces an Excel spreadsheet detailing the budget choices made, and users can save this file. Additionally, if users save their URL locally, they can use this to resume where they left off, as the choices made in the simulator are saved through the unique simulation ID in the URL.

Why is there a limit to how many platforms I can buy, cut, retire, extend, or procure in one year?
The limits in the Defense Futures Simulator were created to enable the simulator to replicate reality. Namely, users cannot retire more platforms than exist in the services’ inventories or extend the service life of more platforms than were planned to be retired. The simulator also has limits on how many platforms a user can buy, cut, retire, extend, or procure in a single year due to the constraints of the defense industrial base. Only so much change to the budget can occur in one year, and the simulator attempts to replicate this by setting limits for certain platforms.

Can I move all the strategic preferences to the right?
Yes. Users can move all the strategic preference sliders to the right. But users’ budget constraints will limit additional spending, so shifting all strategic preferences to the right without changing budget limits will not lead to major changes in defense spending outputs.

How do my choices translate into a new budget?
Each budget option in the Defense Futures Simulator has a relationship to each strategic preference, depending on whether that option would positively or neutrally affect that strategic preference. When users modify their strategic preferences, the simulator adds or cuts according to each option’s relationship with the user’s strategic preference inputs.
Data Decisions continued

What does “no feasible solution” mean?
The Defense Futures Simulator team is constantly working to improve our algorithm, but it does have limitations. If the algorithm cannot converge to a solution that improves the current defense budget based on user inputs in the time allotted, it will default to an unmodified budget. Users will be taken to the results page with no changes suggested and can manually change the budget how they see fit. Users can also try again with different inputs.

The Options

What is the difference between Active, Reserve, and National Guard units?
Active units are maintained near full strength and virtually all personnel are full-time. They participate in frequent training to maintain a certain number of units at high-readiness levels. The Army National Guard and Marine Corps Reserve Forces are both “reserve components.” The Army National Guard can fall under the jurisdiction of either state governments or federal authorities, depending on circumstances. National Guard units and personnel can be ordered into federal service. When this happens, control passes from governors to the president of the United States.

On the other hand, the Marine Corps Reserve Forces operate solely at the federal level. Reserve troops may be activated by the secretary of defense, Congress, or the president, but time limits apply based on the circumstances. For example, Congress has the power to authorize the mobilization of Reserve units with no time limit until six months after a conflict.

I am buying a ship. Why isn’t it affecting the Navy’s force structure?
Although buying a crewed ship will ultimately always affect the Navy’s force structure, it may not affect it during the five-year timeline of this simulator. The Defense Futures Simulator takes fielding delays, or the number of years it takes to build and actually field a platform, into consideration. If a platform would not be obtained within the timeframe of this simulator, it will not change a service’s force structure. This happens most often with ships, which can have fielding delays of up to nine years.

I am retiring a platform. Why isn’t my budget affected?
Although buying one new platform will always cost a user money, retiring a platform may not save money. The only costs a user can forgo when retiring a single platform are operating and support costs. So if a platform does not have these costs associated with it, a user may not see a budget impact.

How do I modify personnel numbers in each service?
The way that personnel are included in the Defense Futures Simulator varies from service to service. For the Army and Marine Corps, users can increase or decrease personnel by changing numbers of units, such as brigade combat teams, infantry battalions, special forces units, and security force assistance brigades. Navy and Air Force platforms include their associated personnel costs; so when a user adds or cuts platforms, appropriate numbers of personnel are increased or decreased as well. Additionally, the readiness options allow users to adjust manning levels within each service.