Function 1 - Motion in XYZ axis	**Function 2 - Concrete control/flow/extrusion**
Robotic arms	Super strong motor pushes concrete through a hose
Sliding mechanism	User turns an auger manually to push concrete through extruder
Tension mechanism	User powered motor (like a bike or something)
Pulley system	Use gravity to push concrete through
User controlled (like a hose)	Mix the concrete at the extruder
Magnetic system (magnets driving the motion)	Using a big moving reservoir like concrete trucks do
Moving bed instead of moving extruder, using strong motion platform	Having two separate reservoirs for concrete mix and water, then mixing in a third location to prevent concrete setting
Using a motor, moving extruder along a threaded rod	Using little spritzers to spritz the concrete with water as the concrete mix flows toward the extruder
Rollers/wheels to facilitate movement	Use a weight system that “tips” and lets a certain amount of concrete through a valve at a given time

Selection Criteria for system level concepts:

- **Is not overly complex** - if a system is overly complex, it is expensive, hard to replicate, and hard to repair.
- **Does not exceed budget in terms of components required** - Expensive designs are unrealistic because the budget is not unlimited. Otherwise we could have robotic arms do everything.
- **Has a reliable degree of consistency** - If a system/design does not produce consistent results, it is not a design worth pursuing.
- **Safety factor, for both the user and overall design** - An unsafe design is a huge red flag for obvious reasons.
- **Does this system choice require other design choices in order to function?** - Sometimes certain design choices necessitate another sub-level system to work in a certain way, which may or may not be possible. This criteria would be for checking if there are any impacts to other systems as a result of the design choice in question.