



# IMPLEMENTED STRATEGIC PRINCIPLES

In order to create the “perfect game” we chose to use a few of the best principles that we think were the best over the years:

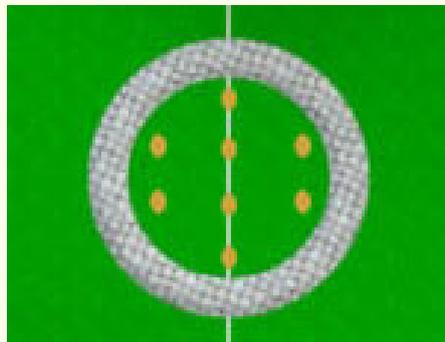
## FIGHT OVER RESOURCES

A principal we loved from some past games was this one, which appeared in 2015’s fight for RECYCLE BINS (mostly in autonomous, and a bit over-valuable), 2016’s middle line BOULDERS, and 2018’s POWER CUBES (spread in different areas near the SWITCH and the SCALE).

## DRIVING OBSTACLES

Inspired mostly by 2010’s BUMPS, some of 2016’s DEFENSES, and 2020’s SHIELD GENERATOR, we wanted to integrate a driving obstacle that would still keep the field pretty open for driving but will require teams to think a little more about the way they’re designing their drivetrain and choosing preferred driving routes.

Those two principles have led us to the idea of what eventually has become the MINING ZONE (filled with 8 NUGGETS).



## SCORING EVALUATION METHOD

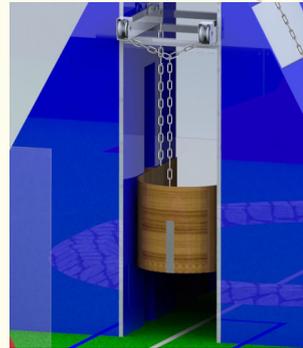
While trying to think how we should evaluate scoring in GOLD FEVER, the first thing that came to mind is 2017’s unique way of hanging GEARS on the PEGS and not being rewarded for it until the PEGS are pulled up and the ROTORS are spinning. A similar method is used in our game with the CART. In addition, 2016’s and 2017’s RP advancement was based on scoring BOULDERS and FUEL (respectively), while having differences in high goal-low goal RP advancement ratio (1:1 ratio in 2016 and 1:3 in 2017). As we thought the low goal was overpowered in 2016 and almost useless in 2017, we decided to have a ratio of 1:2 in our FURNACE.

## A GAME DESIGNED FOR TEAMS OF ALL LEVELS

We feel like it’s obvious that stronger teams should be able to score more and contribute more to their alliance, but in some recent games it felt like rookie teams or some weaker teams (robot-wise only) couldn’t contribute enough. We chose to have in our games high and low goals, different scoring areas, and two separate game pieces. This was somewhat inspired by the overall dynamics of 2019’s game (being able to score HATCH PANELS or CARGO in different heights, field positions, etc).



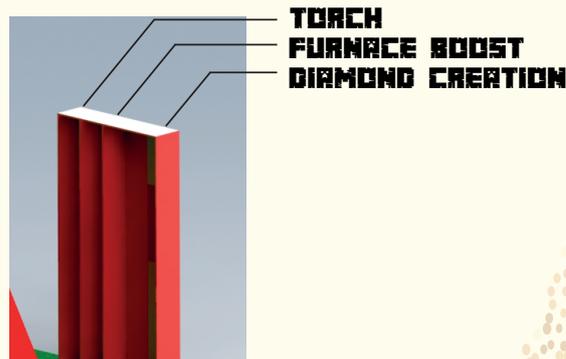
Here you can see the FURNACE and the CART, where you score NUGGETS and COALS respectively. The principles above are implemented in our game as mentioned in their paragraphs.



### UNIQUE IN-GAME FEATURES - ALLIANCE CONTROL

Power ups were an exciting way to make significant in-game strategic decisions in 2018's game. They required at least one ROBOT to do some work that wouldn't impact the score directly but could have changed the outcome of an entire match.

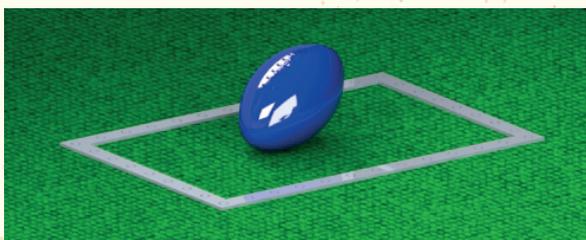
In GOLD FEVER, putting COALS lifted from the CART in the COAL POWER CABINET gives you different COAL POWERS, decided by the alliance.



### UNIQUE IN-GAME FEATURES - FIELD CONTROL

Creating an effect that will make every match a bit different than the others, yet still giving teams equal chances to have a successful match, was one of our main goals. The randomization of the SCALE and the SWITCH colors at the start of each match is a good example of that.

Our randomization makes sure that both alliances will have the chance to get the CROWN JEWEL out of the SAFE in a five seconds random period during the TELEOPERATED PERIOD (indicated by the powered LED STRIPS of the SAFE). Moving the CROWN JEWEL out of the SAFE not during this period will penalize the alliance who got it out (regardless of which one of the CROWN JEWELS was moved).





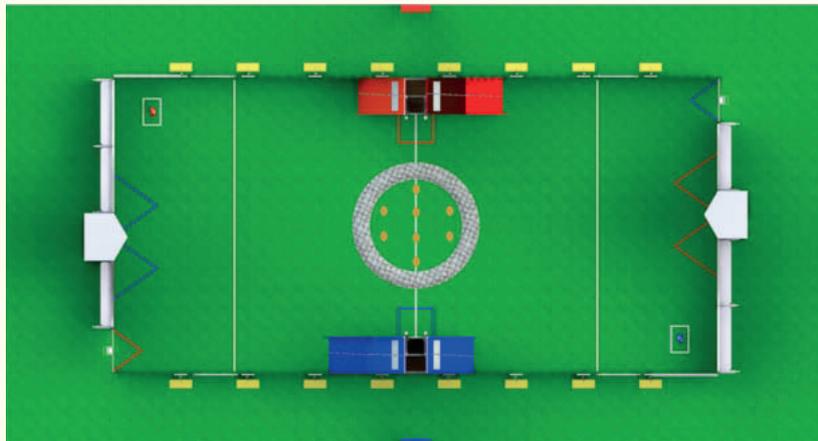
## BALANCED DEFENSE

Defense is always a controversial topic. Opinions may vary between teams and certain people, but it seems like most of them want to allow defense to be a potentially impactful part of the game - without having the ability to ruin the game, to be brutal, and to disallow teams to showcase their ROBOT's qualities.

While 2015 is a year where there was no defense at all and 2019 had defense with no scoring safe-zones and problematic half field crossing rules, the game of 2020 was way more balanced, allowing open-field defense play and also including scoring safe-zones. This has given teams various options regarding building their ROBOTS: make a ROBOT that could deal with hard defense, make a ROBOT that could score from safe-zones, or build one that could do both.

**GOLDFEVER has SAFE ZONES everywhere - but here's the catch - they're pretty small (relative to the MELTDOWN ZONE, which is the NUGGETS launching zone, for example) and good defense can get you in a lot of trouble trying to reach there.**

**SAFE ZONES are marked in red and blue for their respective alliance, either as a triangle or a rectangle.**



## RANKING POINTS DIVERSITY

RANKING POINTS have been a major part of recent years' games. We, as a team, see teamwork as one of the elite *FIRST* core values and we like to see alliances work together. That being said, we don't want to make a situation of reducing the probability of earning a RANKING POINT due to a certain qualification match schedule.

The trend in 2019 and 2020 was that one RANKING POINT could be earned by one ROBOT alone (theoretically, if having a great match) and one RANKING POINT that **requires** at least two ROBOTS completing a mission together.

**GOLD FEVER continues this trend by having the ROYAL CROWN RP, which can be completed by one ROBOT, and the TOUCHDOWN RP, which requires two to three robots (depending on if activated the TORCH COAL POWER or not).**





# AVOIDED

## STRATEGIC PRINCIPLES

Some ideas look good at first but turn out not so great later. We have studied all the games from the last ~15 years and have found some things we think we should avoid:

### **ABANDONING THE BASICS**

Throughout the years, games were being played on fields of similar size and a reasonable driving surface. Abandoning the basics can be exciting, but it is as tricky as it can get. For example, 2009's LUNACY required teams to use specific wheels and had a driving surface which was meant to imitate the gravitation (or lack of it) on the moon. Sounds exciting at first, but turned out to be one of the less-liked games due to it reducing drivers' ability to control their ROBOT too much.

**We wanted to avoid implementing such field changes and to stick to the loved old basics.**

### **HUMAN PLAYER'S IMPACT**

One thing that is agreed by anyone probably is that the game's outcome should be almost exclusively affected by the ROBOTS playing on the field. Nevertheless, HUMAN PLAYERS' interaction is always interesting. In 2009 and 2015 there was a mutual feeling by a lot of those years' participants that HUMAN PLAYERS had too much impact and sometimes didn't allow the ROBOTS to fully use their skills to win the match. Final outcome could have been directly affected by how good the HUMAN PLAYERS are.

In some years human players were not enough involved, but in some years like 2017 or 2018 you did need them for the team to succeed but you didn't have to rely on their personal skills, which was refreshing and fun.

**HUMAN PLAYERS in GOLD FEVER are supposed to do the 'usual' stuff, like inserting game pieces to the field, but also has some different assignments like taking the COALS from the CART, or putting the COALS inside the COAL POWER CABINET.**

### **AUTONOMOUS TO WIN OR LOSE**

Looking back at FRC games, we find 2018's game as a mesmerizing game with one big downside. Many of its matches' scores were pretty much decided by the end of the AUTONOMOUS PERIOD as it was determining the control of the SCALE sometimes for the whole match. This made some matches much less interesting and competitive.

**We love the AUTONOMOUS PERIOD and think it should be diverse, rewarding, and interesting to watch but not game changing. Our AUTONOMOUS PERIOD has in store challenges for teams of all levels, with the potential of hard-working teams to do some very special things that will amaze the crowd and the community in every competitions' week.**

### **RHYTHM IS KEY**

It's really hard to predict what will be the pace of a game before seeing some matches being played, but you could definitely use some guidelines to at least try to make it fun to watch, rhythm-wise. For example, if a ROBOT is expected to spend a lot of time while visiting the FEEDER (like above 20 seconds periods, in 2015), you could tell the pace is slow. If there is going to be a big amount of flying objects launched from different areas at the same time, making it hard for the crowd to follow (as of 2013), the game's probably too fast.

**We can't tell whether our game has the right rhythm or not without seeing it being played, but our**