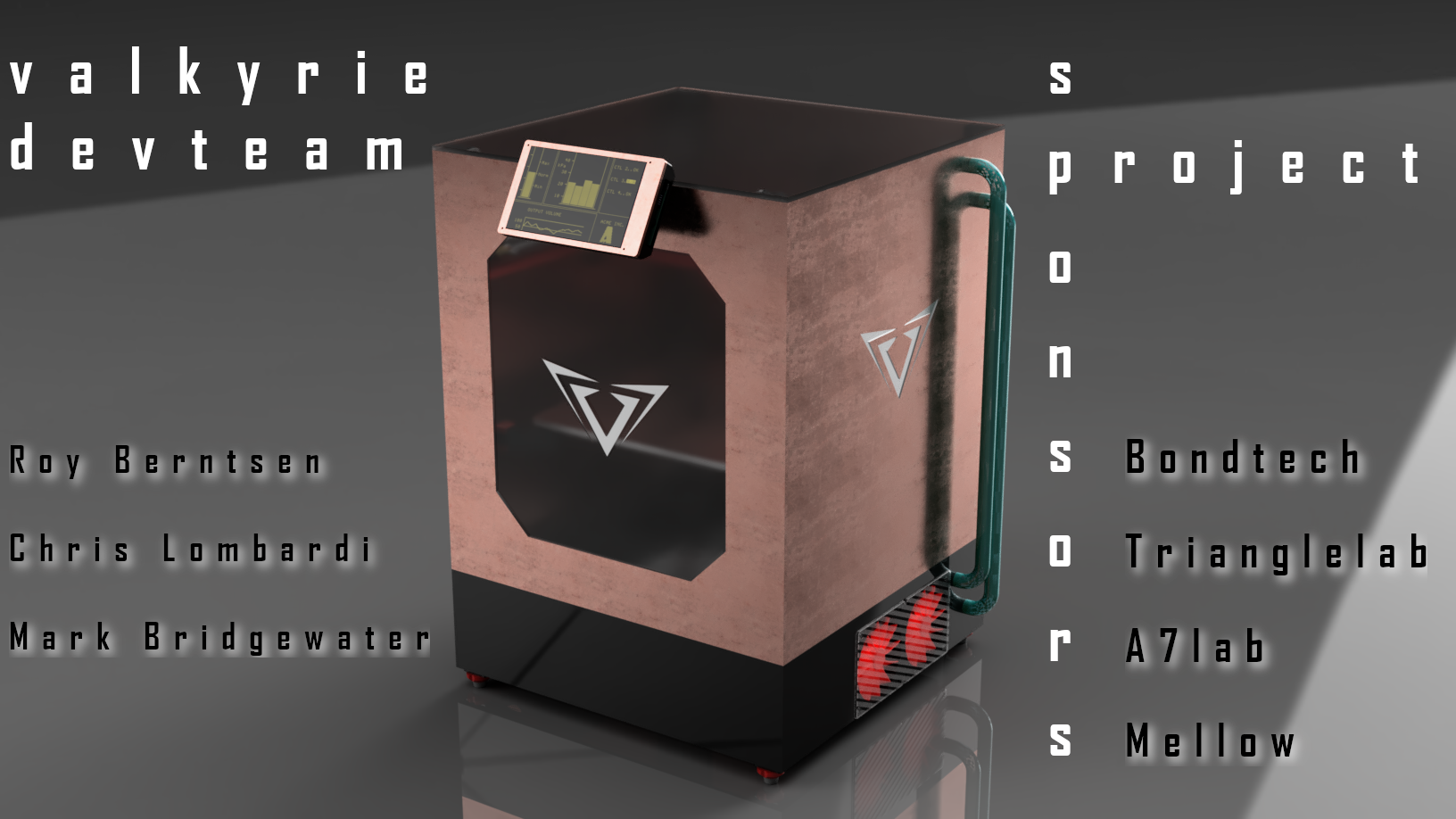
Project Valkyrie

Designing a Premium DIY 3d printer

Discord channel: https://discord.gg/C77tsY5



# By Roy Berntsen

M.Sc Engineering Design

Juli 2021

# The Development Team

Roy Berntsen

Mark Bridgewater - NZ  
Chris Lombardi - USA

# Material Selection – Enclosure and Drybox Panels

# General Requirements

## Product Choice

* The panels should have high temp rating
* Easily sourced
* Cost effective
* Easy to cut
* Easy to assemble/build
* As thin as possible
* Look good

## Function Choices

* Insulate from chamber temp
* Strong
* Low weight

# Design Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| Enclosure Panel Requirements | Essential | Nice To Have | Not So Important |
| Insulative | X |  |  |
| Low Price |  | X |  |
| Low weight |  |  | X |
| High strength |  | X |  |
| Endure high temperature < 90c | X |  |  |
| Nice outer finish |  | X |  |
|  |  |  |  |

# Shortlist of Materials for Enclosure

|  |  |  |  |
| --- | --- | --- | --- |
| Material | Temp Rating |  | Comment |
| MDF |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# 

# Supplier List

* Makersupplies
* Ratrig
* Motedis
* RS Components
* CRD? <https://crd-devices.co.uk/>
* Digikey
* Elfa
* Farnell
* Mauser?
* Aliexpress
  + Mellow Store
  + Fysetc Store
  + Triangle Lab Store
  + BigThreeTech Store