EXHIBIT 3

Executive Summary – Projection Models

- ***"The death rate is a fact; anything beyond this is an inference."*** – Dr. William Farr

  Unfortunately, with respect to COVID-19 and the NVSS COVID Alert No. 2 document issued on March 24, 2020, this brilliant observation is no longer applicable.

- From the start, computer projection models were widely adopted as a means to manage the COVID-19 health emergency. People around the world were concerned about the harm associated with COVID-19 long before it was possible to know any of the potential repercussions of the virus.

- All computer projection models make assumptions and require inputs. Understanding these aspects of the model is crucial to understanding model outputs. Unfortunately, vast uncertainty surrounds most inputs, especially at the start of a public health crisis.

- One assumption, central to all current COVID-19 models, is that the spread of germs is the main factor in disease transmission, even though susceptibility to infection is the main factor. Many models assume everyone is equally susceptible. Susceptibility depends on variables such as available nutrient status, pre-existing conditions, age, genetic predispositions, socioeconomics, individual mental outlook, stress exposure, restorative sleep, bioaccumulation of chemical pollution, environmental exposure, place of residence, and multiple other factors unique to the individual.

- Many COVID-19 projection models presume the frequency of asymptomatic transmission. The underlying assumption is that such infection *is possible.* This assumption, though widespread, is contradicted by the extensive study of nearly 10 million people carried out in Wuhan, China.

- A 2018 modeling study noted, ***"In practice, incorporating asymptomatic carriers into models is challenging due to the sparsity of direct evidence."***

- Stochastic models, such as the Institute for Health Metrics and Evaluation (IHME) model, must manipulate data to obtain useful inputs. This may involve using means, using medians as proxies, using moving averages, imputing values to fill in missing data, dropping numbers that seem too large, and using Gaussian regression to smooth the resulting smorgasbord of adjustments. Each input becomes its own model within a model.

- One of the early attractions of the IHME model was its "ability" to forecast hospital demand. For New York State, as of April 4, 2020, the IHME model projected a need for 65,400 hospital beds. 15,905 beds were actually used, and new hospitalizations continued to decline. For that same date, the IHME model projected a need for 12,000 ICU beds but only 4,100 were used.

- Another attraction of the early IHME model was that its projected numbers in bands narrower than rival models, suggesting its estimations were more precise. Considering data is so scarce and unreliable at the start of an epidemic, narrow estimation bands cannot be legitimate and should be assumed to misrepresent the accuracy of the projections.

- In general, there is no way for officials to evaluate how exactly a disease projection model's inputs and assumptions affect its output. Nor is there a practical way for officials to verify that a model's code and data are secure, or that the model works as advertised. Officials choose to rely on a model, *not* because of the accuracy of the model, but for reasons that are often undisclosed.

- **The Imperial College COVID Model caused international panic by using a model that predicted a vast number of deaths from COVID-19.** When the model's programming was finally made public, it was learned by an independent investigation that the team, led by epidemiologist Neil Ferguson, had cleaned up the code with the assistance of Microsoft. This raises additional questions of the presence of willful misconduct.

- Insurance companies might be a better choice than academic institutions to develop projection models. ***"Insurers employ modelers and data scientists, but also employ managers whose job is to decide whether a model is accurate enough for real world usage and professional software engineers to ensure model software is properly tested, understandable and so on. Academic efforts don't have these people, and the results speak for themselves."***

- Early diagnostic models were as inaccurate as early projection models. In the beginning of April 2020, just a few months after the first cases of COVID-19 appeared in the United States, over 4,900 studies analyzing diagnostic models had already been conducted and published. A meta-analysis concluded, ***"…proposed [diagnostic] models are poorly reported, at high risk of bias, and their reported performance is probably optimistic. Hence, we do not recommend any of these reported prediction models for use in current practice."***

- Regardless of how impressive the model is, or how well it fits the past, the future is always unpredictable.