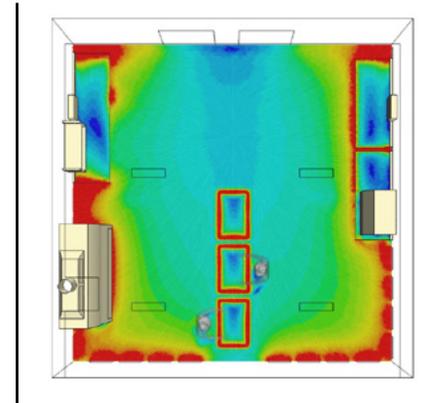
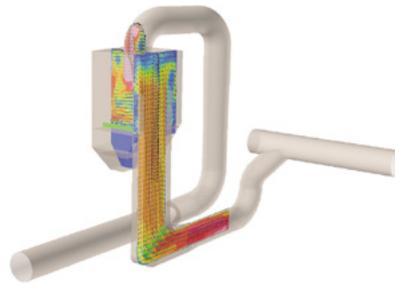


COMPUTATIONAL FLUID DYNAMICS (CFD) ASSESSMENTS



Advanced analysis to optimize equipment, industrial processes, building systems and human environments

RWDI is a firm of aerodynamists – we live and breathe fluid flow. RWDI's fluid flow specialists use CFD to help clients achieve a wide range of objectives – from optimizing the flow of cooling fluid around machine components to enhancing ventilation conditions for perishable foods during shipping.



CFD of Industrial Hopper and Cleanroom

the findings, we often work with design teams to apply relevant insights – whether the goal is to achieve flow efficiencies in an indoor space or enhance pollution controls outside an industrial facility.

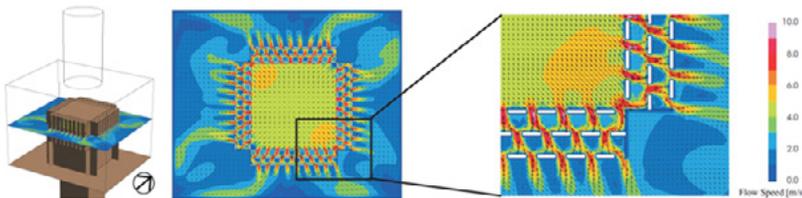
Our teams have helped clients achieve success in:

- **Equipment design**
Optimizing the flow of air through a motor, a CPU or a piece of imaging equipment.
- **Power generation**
Modeling how water flows within a building in the event of a cooling fluid spill; modeling the flow around ground or roof top mounted PV panels to optimize cooling.
- **Emergency preparedness**
Modeling the impact of hurricane winds on cooling performance of emergency generators; modeling the evacuation of smoke from atria.
- **Pollution control**
Understanding how emissions will travel from one or more sources, in a range of weather conditions.
- **Complex ventilation**
Informing the design of HVAC and other building systems for environments with exacting demands, from operating rooms to rare-book libraries.

In addition to their renowned technical depth, our team of engineers and scientists is known for their strong focus on clients' needs and business goals. RWDI helps clients choose the right methodology for their circumstances, and makes sure they have everything they need to act effectively on the results of the analysis.

How we help

We begin by engaging thoughtfully with our clients to make sure we fully understand their context and priorities, so we can deliver the technical analysis that's most effective in helping them realize their objectives. Once we've carried out the CFD analysis and shared



CFD of Paint Booth Exhaust

- **Sports performance**
Helping teams and venues gain insight into the effect of airflows on the play of the game.
- **Building design**
Delivering design guidance to enhance the comfort of indoor and outdoor spaces, support door operability, mitigate unwanted odor migration, and more.
- **Automobile design**
We have supported automotive suppliers with the design of their products, making their manufacturing processes safe and improving the worker environment.

Clients who work with our fluid flow specialists benefit from the complementary insights of our in-house climate and meteorology teams as well as teams conducting continuous wind tunnel studies. Their knowledge of both typical and extreme weather lends rigor and depth to analyses of wind effects on sensitive facilities and emergency scenario planning for infrastructure. They can also help designers harness the local microclimate, using passive techniques to achieve thermal comfort in indoor and outdoor spaces.

RWDI is a valuable partner when you seek to...

Explore Innovations

- Validate or refine the design of vehicles and equipment
- Meet stringent ventilation requirements for specialized facilities (laboratories, cleanrooms, museum vaults, archives)

Create Opportunities

- Identify optimal heating and cooling approaches, including passive techniques
- Select the most cost-effective strategies to mitigate pollution

Meet Challenges

- Minimize spoilage of perishable goods during shipping and storage
- Enhance the performance of baghouses and other pollution control equipment

Fulfill Expectations

- Create safe, comfortable conditions for occupants of indoor and outdoor spaces
- Achieve and demonstrate facilities' preparedness for emergencies and extreme weather