Improving the quality of life in Chicagoland and NW Indiana neighborhoods negatively impacted by aviation changes.
Agenda

• What is the O’Hare Modernization Program (OMP)
• How the OMP has led to the current noise and pollution crisis
• NextGen System
• Who is FAiR
• What are solutions to help remedy this crisis
Project History:
O’Hare Modernization Program (OMP)
Timeline

History of the OMP

• In 2001 the City of Chicago proposed a ~$7 billion reconfiguration of O’Hare, known as the O’Hare Modernization Program (OMP).

• The FAA approved the OMP and master plan projects in September 2005.

• The OMP changes the airport from a predominantly intersecting runway configuration to six parallel runways with two crosswind runways.
Runway Configuration Timeline

ORD Layout 1950-2003

ORD New Runway Layout Starting 2013

ORD Runway Layout 2017 & Future
The OMP reconfiguration will funnel 70% of arrivals over dense northern portions of Chicago, areas not used to such traffic.

This massive shift in airplane traffic has put the burden of noise, fuel, air and visual pollution almost solely on the residents of North/NW side neighborhoods and near NW suburbs.
• The **REAL** reason diagonal runway 15/33 was closed, and one year ahead of schedule.

O'Hare's ongoing shift to **east-west runways** from old diagonal runways cleared the space for the **expansion** and the possibility of two more western concourses, and another western terminal in the future.
Noise:
Impact of O’Hare Modernization Program (OMP) Build-Out
Noise: OMP Impact

Average Monthly Complaints

YEAR
2008 2017
0 467,447

Average Monthly Operations

YEAR
2008 2017
0 73,464 71,900
Among the 10 busiest U.S. airports, as ranked by total 2014 operations, O’Hare racked up the most 2014 noise complaints – and the most complaints – by wide margins.

<table>
<thead>
<tr>
<th>Rank/Airport</th>
<th>2014 Operations</th>
<th>2014 Complaints</th>
<th>Complaints per 1,000 operations</th>
<th>Avg. complaints per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. O’Hare</td>
<td>881,933</td>
<td>266,211</td>
<td>304.12</td>
<td>22,350.9</td>
</tr>
<tr>
<td>2. Atlanta</td>
<td>868,359</td>
<td>162</td>
<td>0.19</td>
<td>14</td>
</tr>
<tr>
<td>3. Dallas-Ft. Worth</td>
<td>679,820</td>
<td>204</td>
<td>0.30</td>
<td>17</td>
</tr>
<tr>
<td>4. Los Angeles</td>
<td>636,706</td>
<td>8,062</td>
<td>12.66</td>
<td>672</td>
</tr>
<tr>
<td>5. Denver</td>
<td>575,160</td>
<td>4,522</td>
<td>7.86</td>
<td>377</td>
</tr>
<tr>
<td>6. Charlotte*</td>
<td>545,294</td>
<td>12,045</td>
<td>22.09</td>
<td>1,004</td>
</tr>
<tr>
<td>7. Las Vegas</td>
<td>522,067</td>
<td>6,422</td>
<td>12.30</td>
<td>535</td>
</tr>
<tr>
<td>8. Houston (Bush)</td>
<td>508,940</td>
<td>194</td>
<td>0.38</td>
<td>16</td>
</tr>
<tr>
<td>9. San Francisco</td>
<td>431,966</td>
<td>14,999</td>
<td>34.72</td>
<td>1,250</td>
</tr>
<tr>
<td>10. New York (JFK)</td>
<td>431,236</td>
<td>23,657</td>
<td>54.86</td>
<td>1,971</td>
</tr>
</tbody>
</table>

*Due to a computer glitch in May and June of 2014, Charlotte provided July 2014 to June 2015 data for its 12-month count.
**Los Angeles counts complainants by individuals, not households or unique addresses.

SOURCES: FAA, individual airports
# Noise Complaints by Month

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>31</td>
<td>860</td>
<td>907</td>
<td>1,349</td>
<td>5,635</td>
<td>1,357</td>
<td>6,321</td>
<td>39,500</td>
<td>359,633</td>
<td>354,185</td>
</tr>
<tr>
<td>February</td>
<td>20</td>
<td>1,186</td>
<td>968</td>
<td>1,060</td>
<td>3,236</td>
<td>966</td>
<td>7,472</td>
<td>122,803</td>
<td>343,149</td>
<td>337,094</td>
</tr>
<tr>
<td>March</td>
<td>60</td>
<td>1,069</td>
<td>1,222</td>
<td>1,209</td>
<td>2,175</td>
<td>1,402</td>
<td>11,145</td>
<td>352,846</td>
<td>468,691</td>
<td>466,189</td>
</tr>
<tr>
<td>April</td>
<td>63</td>
<td>985</td>
<td>1,478</td>
<td>1,099</td>
<td>1,113</td>
<td>1,863</td>
<td>10,961</td>
<td>408,468</td>
<td>459,026</td>
<td>565,697</td>
</tr>
<tr>
<td>May</td>
<td>92</td>
<td>1,235</td>
<td>1,168</td>
<td>1,192</td>
<td>1,210</td>
<td>1,881</td>
<td>21,436</td>
<td>407,523</td>
<td>415,778</td>
<td>606,591</td>
</tr>
<tr>
<td>June</td>
<td>140</td>
<td>1,131</td>
<td>1,587</td>
<td>1,340</td>
<td>1,332</td>
<td>2,419</td>
<td>22,566</td>
<td>436,119</td>
<td>483,443</td>
<td>483,252</td>
</tr>
<tr>
<td>July</td>
<td>138</td>
<td>1,466</td>
<td>1,077</td>
<td>849</td>
<td>1,074</td>
<td>2,280</td>
<td>27,956</td>
<td>382,999</td>
<td>512,849</td>
<td>490,368</td>
</tr>
<tr>
<td>August</td>
<td>210</td>
<td>1,649</td>
<td>1,358</td>
<td>2,050</td>
<td>1,470</td>
<td>2,296</td>
<td>30,249</td>
<td>420,716</td>
<td>503,447</td>
<td>427,557</td>
</tr>
<tr>
<td>September</td>
<td>151</td>
<td>1,883</td>
<td>1,290</td>
<td>3,120</td>
<td>993</td>
<td>2,124</td>
<td>32,532</td>
<td>388,767</td>
<td>434,796</td>
<td>476,086</td>
</tr>
<tr>
<td>October</td>
<td>123</td>
<td>1,514</td>
<td>1,207</td>
<td>3,292</td>
<td>1,366</td>
<td>3,496</td>
<td>33,866</td>
<td>401,379</td>
<td>403,855</td>
<td>519,276</td>
</tr>
<tr>
<td>November</td>
<td>271</td>
<td>825</td>
<td>1,234</td>
<td>3,443</td>
<td>877</td>
<td>4,763</td>
<td>30,748</td>
<td>351,873</td>
<td>319,437</td>
<td>465,943</td>
</tr>
<tr>
<td>December</td>
<td>1,184</td>
<td>1,055</td>
<td>850</td>
<td>4,044</td>
<td>1,016</td>
<td>4,646</td>
<td>32,959</td>
<td>345,168</td>
<td>263,238</td>
<td>Pending</td>
</tr>
<tr>
<td><strong>Total Complaints</strong></td>
<td><strong>2,483</strong></td>
<td><strong>14,858</strong></td>
<td><strong>14,346</strong></td>
<td><strong>24,047</strong></td>
<td><strong>21,497</strong></td>
<td><strong>29,493</strong></td>
<td><strong>268,211</strong></td>
<td><strong>4,058,161</strong></td>
<td><strong>4,967,342</strong></td>
<td><strong>5,192,238</strong></td>
</tr>
</tbody>
</table>
Noise: Complaints By Community

17,480,819 Noise Complaints Filed
Noise: OMP Impact

Noise at Night - Air Cargo

• A 190-percent increase in inbound air cargo volumes and 300-percent increase in outbound volumes by 2040 is being predicted.

• The CDA is currently building a new cargo facility to expand cargo capacity of the airport by more than 50-percent.

• DHL opened a new facility in 2015 that added 491,000 square feet of cargo handling capacity to O'Hare.

Landed cargo weights for top 10 U.S. airports by volume, 2000 and 2014

<table>
<thead>
<tr>
<th>Airport</th>
<th>2000</th>
<th>2014</th>
<th>% Change, 2000-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memphis (MEM)</td>
<td>12,636,635,340</td>
<td>23,760,172,569</td>
<td>88%</td>
</tr>
<tr>
<td>Anchorage (ANC)</td>
<td>16,167,182,855</td>
<td>16,271,897,386</td>
<td>1%</td>
</tr>
<tr>
<td>Louisville (SDF)</td>
<td>7,973,435,125</td>
<td>11,568,369,154</td>
<td>45%</td>
</tr>
<tr>
<td>Chicago O'Hare (ORD)</td>
<td>4,123,267,738</td>
<td>7,541,411,779</td>
<td>83%</td>
</tr>
<tr>
<td>Miami (MIA)</td>
<td>5,858,478,455</td>
<td>7,192,790,882</td>
<td>23%</td>
</tr>
<tr>
<td>Indianapolis (IND)</td>
<td>5,767,863,860</td>
<td>5,355,984,715</td>
<td>-7%</td>
</tr>
<tr>
<td>Los Angeles (LAX)</td>
<td>5,784,310,530</td>
<td>4,297,359,912</td>
<td>-26%</td>
</tr>
<tr>
<td>Cincinnati (CVG)</td>
<td>1,824,952,609</td>
<td>3,644,404,568</td>
<td>100%</td>
</tr>
<tr>
<td>New York City John F. Kennedy (JFK)</td>
<td>5,586,263,701</td>
<td>3,170,996,874</td>
<td>-43%</td>
</tr>
<tr>
<td>Dallas/Fort Worth (DFW)</td>
<td>3,382,896,291</td>
<td>3,140,733,270</td>
<td>-7%</td>
</tr>
</tbody>
</table>

Note: 2014 figures are based on preliminary data. Source: Chicago Metropolitan Agency for Planning analysis of FAA data.
Noise: OMP Impact on Health

- Arrhythmia (Irregular heartbeat)
- Cognitive Disturbances
- Coronary Artery Disease
- Diabetes
- Disturbed Sleep
- Emotional Disturbances
- Hypertension
- Heart Failure
- Stroke
Impact
Pollution & Toxins
“Pollution **kills communities**, not just people....”

– Scott Fulton President, Environmental Law Institute
Particulate Matter (PM), are air pollutants emitted in plane exhaust.

The smallest particulates ($\text{PM}_{2.5}$) can remain in the air for weeks.

Individuals with pre-existing heart or lung disease, children, the elderly and pregnant women are especially vulnerable to this type of pollution.

There are no safe levels of exposure.

**Particulate Matter Size Comparison**

- **Human hair**: about 70µm wide
- **Grain of Sand**: about 50µm wide
- **PM$_{10}$**: about 10µm wide
- **PM$_{2.5}$**: Less than 2.5µm wide
Airport emissions have been linked to cancer, asthma, brain tumors, emphysema, heart disease, leukemia, Hodgkin’s disease, kidney damage, and numerous other conditions.
Pollution: OMP Impact

Local Pollution and Toxic Air Emission Studies

- In 2002, the City of Park Ridge, Illinois paid for environmental experts to analyze the effects of the proposed O’Hare Airport expansion on their neighborhood.

- The studies showed that ORD was/is a major source of toxic air emissions and those toxic air emissions impose undesirable cancer risks on a vast area of residential communities in the Chicago metropolitan area.

- Environ and Mostardi-Platt advised Federal and State agencies, in conjunction with affected communities, need to measure, report, assess and control toxic emissions from O’Hare International Airport. Permanent and comprehensive monitoring systems should be installed around O’Hare and impacted communities.

Based on their findings, Environ and Mostardi-Platt concluded:

*O’Hare International Airport should NOT be expanded.*
A 2014 air quality study conducted by the University of Southern California Keck School found pollution levels within nine square miles of Los Angeles International Airport (LAX) were 10 times higher than in other parts of LA and affects neighborhoods up to 10 miles east of the airport.
Pollution: OMP Impact

O’Hare International Airport (ORD) is 4x larger in size than LAX. Chicago is also much more densely populated than LA with nearly 12,000 residents per square mile over Los Angeles’s 8,300 residents per square mile.
Concentrated Noise
Next Generation Air Transportation System (NextGen)
Next Generation Air Transportation System (NextGen) is a National Airspace System being implemented across the United States. It converts current radar based tracking to GPS or satellite based.
NextGen will put all aircraft into a few narrow corridors, creating concentrated noise. **Flight paths will shrink from miles wide to a mere couple of thousand feet** and planes will fly at lower altitudes and closer together.
The **Wake Recat system** part of NextGen (and being implemented in Chicago) enables planes to **fly closer together** during take-off and landing.

What could go wrong?
Noise complaints and legal filings have **exploded** from San Diego to Charlotte, North Carolina; Phoenix, Arizona to Baltimore, Maryland; and from Florida to New York as flights are **concentrated at lower altitudes, in narrower paths and on more frequent schedules**.

“**FAA officials knew a decade ago some homeowners would suffer more noise because of the changes, but hoped their complaints would be offset by the people who benefited.**”

-- David Grizzle, a former FAA chief operating officer
Citizens Fighting Back: Fair Allocation in Runways (FAiR)
What and Who is FAiR?

How We Came To Be...

• In October 2013, residents around O’Hare woke up to a new “sky superhighway” over their homes caused by runway configuration changes.

• Tranquil neighborhoods— including Mayfair, Norwood Park, Park Ridge, Wood Dale, Itasca and the 39th, 40th, 41st and 45th wards in Chicago were suddenly dealing with a heavy stream of plane traffic day and night.

• This dramatic change in flight paths from diagonal runways to predominantly east-west parallel runways was made without resident input or informed consent.
Neighbors from these communities got together to discuss the issue of noise and pollution and what they could do about it.

– The premise and name of FAiR came about in these meetings.

These runway changes have negatively affected our daily lives, our sleep, health and our property values by increasing noise and pollution over communities.
As the number of communities affected by noise has grown both east and west of the airport, so has FAiR. We launched a new website and membership continues to grow daily as do our Facebook and Twitter followers. We filed for non-profit status to strengthen the organization and to enable members to contribute to our cause.

On July 10, 2017 we received 501c3 non-profit status!
The Facts

• New Runway configurations negatively impact Chicago and suburban neighborhoods
• Increased air traffic means increased noise pollution
• Increased air traffic means increased air pollution
• Citizens can take action, including legal action

YOU CAN HELP!
1. **Support and champion immediate and long-term solutions** to mitigate and abate noise and air pollution generated by current and future airport operations.

2. **Educate community members, elected and appointed officials and business interests** that increasing the utilization of regional airports is necessary to safely meet the future airport capacity needs of the entire region. This includes the use of regional airports such as Gary Chicago, Rockford, and the yet to be constructed South Suburban Airport.
3. Coordinate interested residents and businesses into strong, influential support groups to rally for a community-sensitive, regionalized aviation policy.

4. Litigate if necessary to compel our elected and appointed political representatives to enforce existing municipal, state, and federal laws on behalf of the public interest.
Legal Action
There are currently 2,000+ noise lawsuits against the FAA winding through courts.

Noise precedents have been established in Los Angeles, CA; Laguna Beach, CA and Phoenix, AZ.

In October 2017, Baltimore, MD became the latest city to file suit against the FAA.
Bensenville Residents Win Round 1 Against Airplane Noise!

In 2015, the owners of 65 homes in Bensenville filed suit, against the City of Chicago, asserting claims of "inverse condemnation" regarding airplane noise. In October 2017 the homeowners claimed a significant victory after a Cook County judge allowed a lawsuit against Chicago to proceed.

The case has been in limbo since 2015 as lawyers for Chicago tried to get the case dismissed.

The lawsuit seeks, at a minimum, that residents be compensated for the fair value of their homes before the runway opened.

Chicago Legal Department Officials Have Repeatedly Said This Complaint Has No Merit...
Laguna Beach Wins Departure Case!

• Laguna Beach reached a settlement with FAA in the city's lawsuit over departure patterns at John Wayne Airport.

• Aircraft will be required to cross the coast south of Laguna Beach at an altitude of more than 10,000 feet. This is expected to decrease airplane noise for residents.

• At the city's urging, the FAA already decreased the percentage of planes turning early over Laguna Beach from 55% of flights in 2014 to 11% of flights in 2017.
ARSAC Wins for Southern CA Region

• **Alliance for a Regional Solution to Airport Congestion** (ARSAC) is a grassroots organization formed in 1995 in Southern California.

• Its mission is to establish a unified voice of elected officials, business and community leaders to promote a regional solution for the future commercial aviation demands of the entire Southern California region.

• Together they have improved airfield safety without moving runways closer to airport neighbors.

• These taxiway enhancements will result in a reduction in aircraft emissions, thereby protecting the surrounding communities and the 50,000 people working at LAX.
On August 29th, 2017, the U.S. Court of Appeals for the District of Columbia Circuit agreed with the city of Phoenix and its historic districts that the FAA was “arbitrary and capricious” in its flight procedure revisions in that area. The court said by leaving people in the dark, the agency made it impossible for the public to express views on the project’s potential effects — something the FAA is especially required to do for historic places and parks.
NOISE ACTION PLAN
FAiR is formulating a comprehensive **NOISE ACTION PLAN**

Important noise mitigation measures include but are not limited to:

**O'Hare All Hours:**
- Increase glide slope to 3.2 degrees to increase altitude and reduce noise of arrivals
- Eliminate visual approaches to increase altitude and reduce noise of arrivals
- Mandate vortex generators on all A300 series aircraft to reduce noise of arrivals
- Set phase-out for Stage 3 engines

**O'Hare Fly Quiet:**
- Make Fly Quiet mandatory from 10pm to 7am
- Mandate full-length runway departures of all aircraft to increase altitude and reduce noise of departures
- Limit operations to 1 arrival and 1 departure runway from 10pm-12am and 5am-7am
- Enact full curfew from 12am-5am
**National:**
Revise outdated ANCA to reflect noise impacts that didn't exist in 1990
Revise outdated DNL metric
Mandate environmental standards for aircraft

**Regional:**
Reduce operations at O'Hare and Midway through use of Rockford, Gary Chicago, and SSA
Establish Select Committee similar to Bay Area
Tax credits for homeowner funded noise mitigation
Fly Quiet is **unsustainable** without runway 15/33.

The impacts are **too great** on the East/West and 4/22 communities as shown in Test 3 and proposed IFQ.

Demand management is **critical** for the **entire** period of 10 pm to 7 am.
What We Propose

• Make Fly Quiet **mandatory** from 10pm - 7am

• Restrict all runway operations from 12am - 5am
  • This is the lowest demand period and averages 50 flights or 2% of total operations

• Limit operations from 10pm-12pm & 5am-7am to 1 arrival and 1 departure runway
## Average Departures by Hour

### Operations by Hour (%)

<table>
<thead>
<tr>
<th></th>
<th>10 p.m.</th>
<th>11 p.m.</th>
<th>12 a.m.</th>
<th>1 a.m.</th>
<th>2 a.m.</th>
<th>3 a.m.</th>
<th>4 a.m.</th>
<th>5 a.m.</th>
<th>6 a.m.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2Q 2017</td>
<td>35.4%</td>
<td>12.8%</td>
<td>5.8%</td>
<td>3.3%</td>
<td>3.1%</td>
<td>1.7%</td>
<td>1.0%</td>
<td>7.5%</td>
<td>29.4%</td>
<td>100%</td>
</tr>
<tr>
<td>Departures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FlyQuiet Program

- **16 Departures 2Q2017**
- **13 Departures 1Q2017**

![Bar chart showing average departures by hour for FAiR Allocation in Runways program](chart.png)
# Average Arrivals by Hour

## Operations by Hour (%)

<table>
<thead>
<tr>
<th>Time</th>
<th>2Q 2017</th>
<th>10 p.m.</th>
<th>11 p.m.</th>
<th>12 a.m.</th>
<th>1 a.m.</th>
<th>2 a.m.</th>
<th>3 a.m.</th>
<th>4 a.m.</th>
<th>5 a.m.</th>
<th>6 a.m.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrivals</td>
<td></td>
<td>13.4%</td>
<td>12.9%</td>
<td>5.9%</td>
<td>2.4%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>8.8%</td>
<td>16.7%</td>
<td>36.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 2Q2017 Arrivals
- 29 Arrivals

### 1Q2017 Arrivals
- 17 Arrivals

*12 Month Average equals the average of 3Q 2016, 4Q 2016, 1Q 2017 and 2Q 2017*
How Can We Increase Altitude?

• Increase glide slope for arrivals to 3.2 degrees to reduce noise
• Eliminate visual approaches for arrivals
• Mandate full-length runway departures during FQ and low demand daytime hours
Be a part of the movement:
Call to Action
Reject the Status Quo!

“...You can’t fight city hall...the Chicago Machine always wins”

Other cities - Bensenville, IL; Phoenix, AZ; Los Angeles, CA; Laguna Beach, CA etc. have all successfully fought airport “modernization” through legal means and it is time that we do the same!

“...I’ve lived here all my life and there has always been noise from O’Hare”

Many of you experienced little or no noise from O’Hare. Then suddenly in 2013 we woke up and had superhighways over their heads due to new runway configurations. We didn’t move to the airport – it moved over us.

“Status quo is, you know, Latin for ‘The mess we’re in.’”

~Ronald Reagan
Join the Fight!

Join FAiR and Help Us Protect Our Neighborhoods!

- Join FAiR today to receive our newsletter and stay informed [www.fairchicago.org](http://www.fairchicago.org)
- Volunteer or join a FAiR committee. We need you!
- Consider making a financial contribution to FAiR. Contributions are essential for the vitality of the organization and go toward operating costs, outreach and legal activities.
- Follow us on Twitter: @FairChicago
- Follow and Like us on Facebook [https://www.facebook.com/FairAllocationInRunways/](https://www.facebook.com/FairAllocationInRunways/)
- File a noise complaint through the City of Chicago site through our app on website (chicagonoisecomplaint.com)
- Contact Your Elected Officials

Tell Your Friends and Neighbors about FAiR!
What Can You Do?

Support FAiR’s efforts and make a contribution today!

Thanks!
Thank You!