

# Incident Management

“Making sure things go **right**  
when they inevitably go wrong.”

Gareth Eason, HEAnet  
for TF-NOC, Zürich, 2011-06-29

- HEAnet background: What do we do?
- Why manage incidents?
- How does HEAnet manage incidents?
- Implementation of a new incident management system
- Lessons learned

- HEAnet is Ireland's research and education network (NREN)
- Set up in 1983 as a collaborative body by the seven Irish universities and the Higher Education Authority
- Became a non-profit, limited company in 1997
- Approximately 50 staff today

- 7 Universities & DIT
- 13 Institutes of Technology
- 16 3<sup>rd</sup> level colleges and VECs
- 24 non-profit and research organisations
- Government & Administrative bodies
- In excess of 180,000 end users
- 4,000 primary and post-primary schools

## National

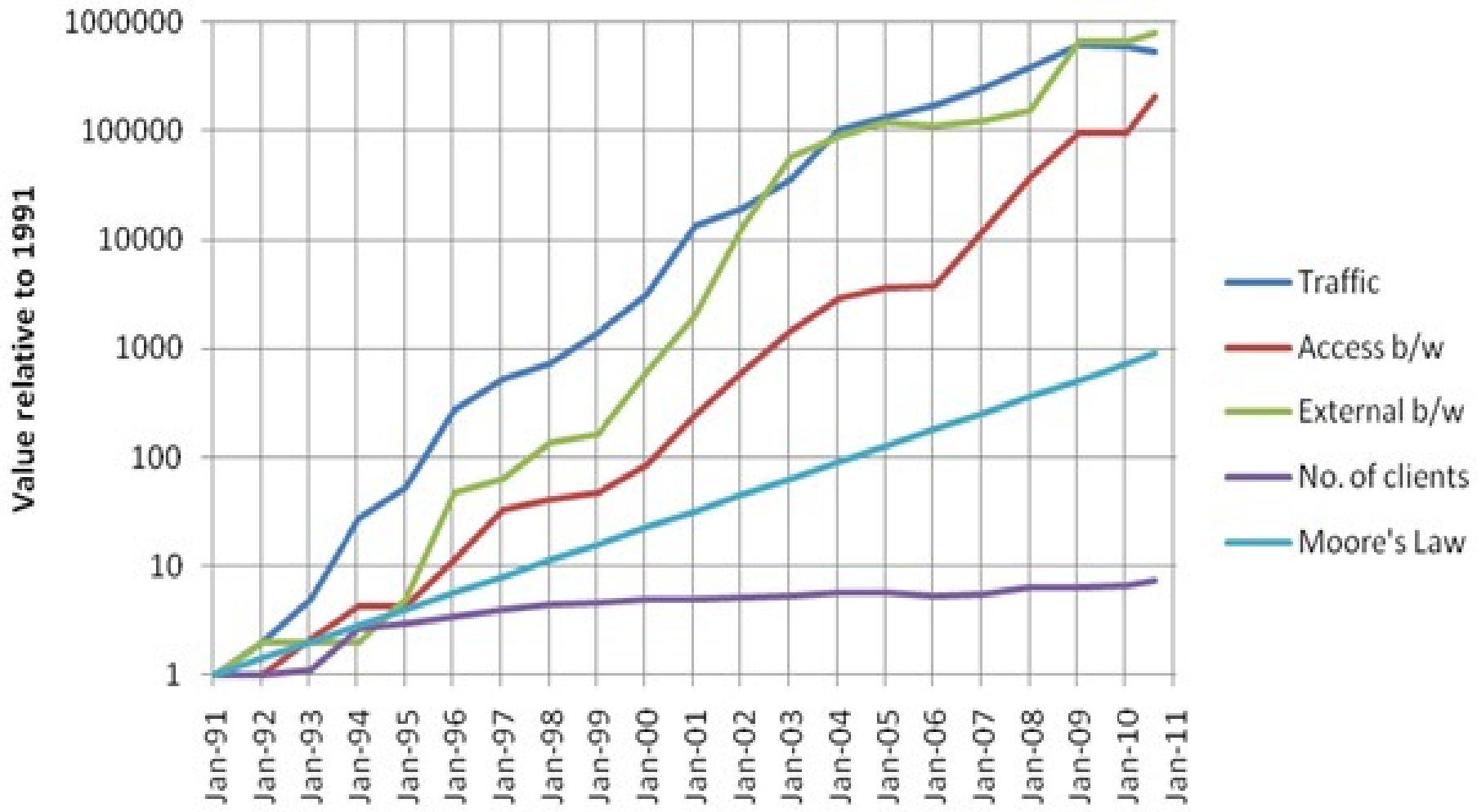
- IBEC – TIF/Telecoms Internet Federation
- INEX/Internet Neutral Exchange
- ISPAI / Internet Service Provider Association of Ireland

## International

- EU funded Framework Projects
- RIPE Network Co-ordination Centre (NCC)
- DANTE/TERENA (37 countries)
- GÉANT/NREN Consortium Policy Committee
- JANET (UK) and JANET-CERT
- MoU with Internet 2/ NGI

- Provide high quality Internet services to our members
- Enable research and learning through leading edge shared services
- Act as a representative body for the ICT education & research community
- Facilitate innovation and collaboration
- Ensure value for money

# Network Trends 1991-



**2008**

First 10Gbps Client  
Connections

**2009**

Resilience, Wireless  
Strategy

**2010**

Schools 100 Mbit/s  
Connections

**2011 - 2013**

Data Storage  
National Data Centre  
Next Generation Network  
Cloud Computing  
Wireless



- An **unplanned interruption** to an IT Service or a reduction in the Quality of an IT Service.
- Typically, something has gone wrong
- Sources:
  - Automated alerts
  - Customers
  - NOC observations
  - Suppliers

Top 3 reasons to manage incidents:

1. Keep customers happy
2. Keep customers happy
3. Keep customers happy

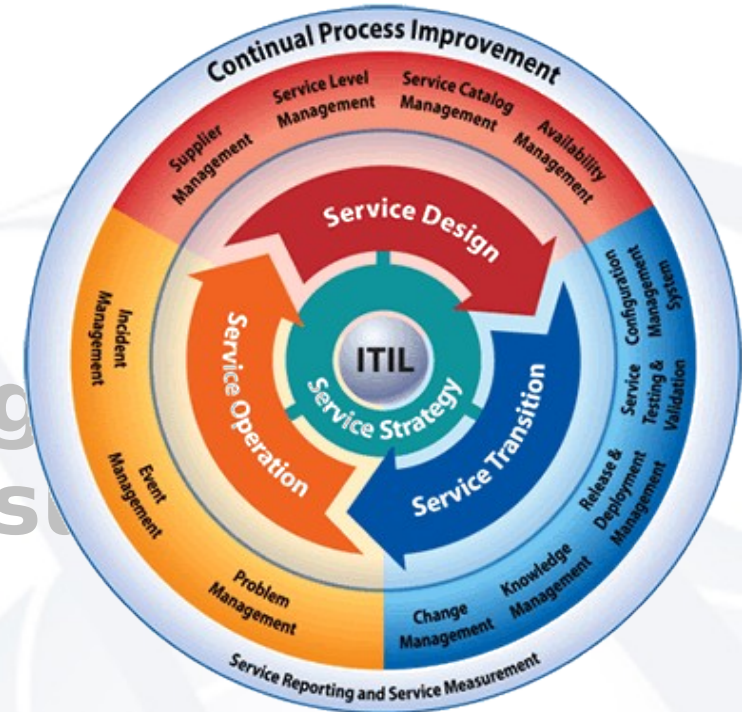
Distant 4<sup>th</sup> reason:

4. Continuous Service Improvement

**“You can't manage what  
you don't measure”**

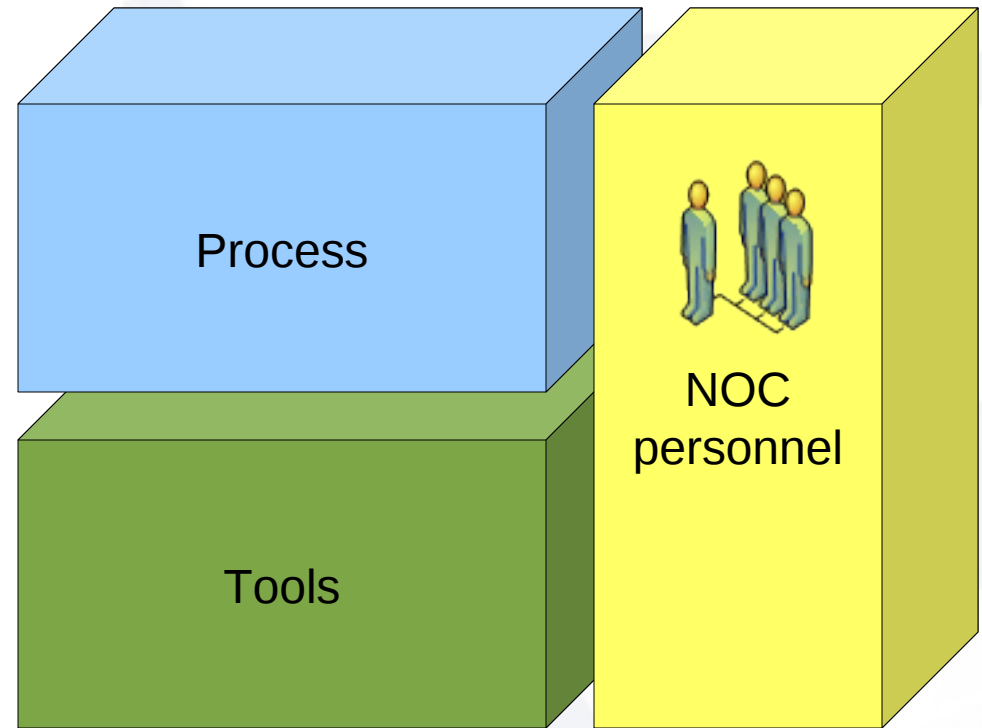





“You can't manage  
you don't measure”



Measure, manage and  
**continually improve service**

- Fundamentally process driven
- Supported by tools
- Managed by NOC staff
- **People** are the most critical



- **Good people** 
  - Experienced and know what they are doing
- **Good processes** 
  - Tried, tested and continually improved
- **Poor tool support** 
  - Custom; built for a need 7 years ago
  - No support
  - Inflexible; not practical to extend
  - Not all incidents captured

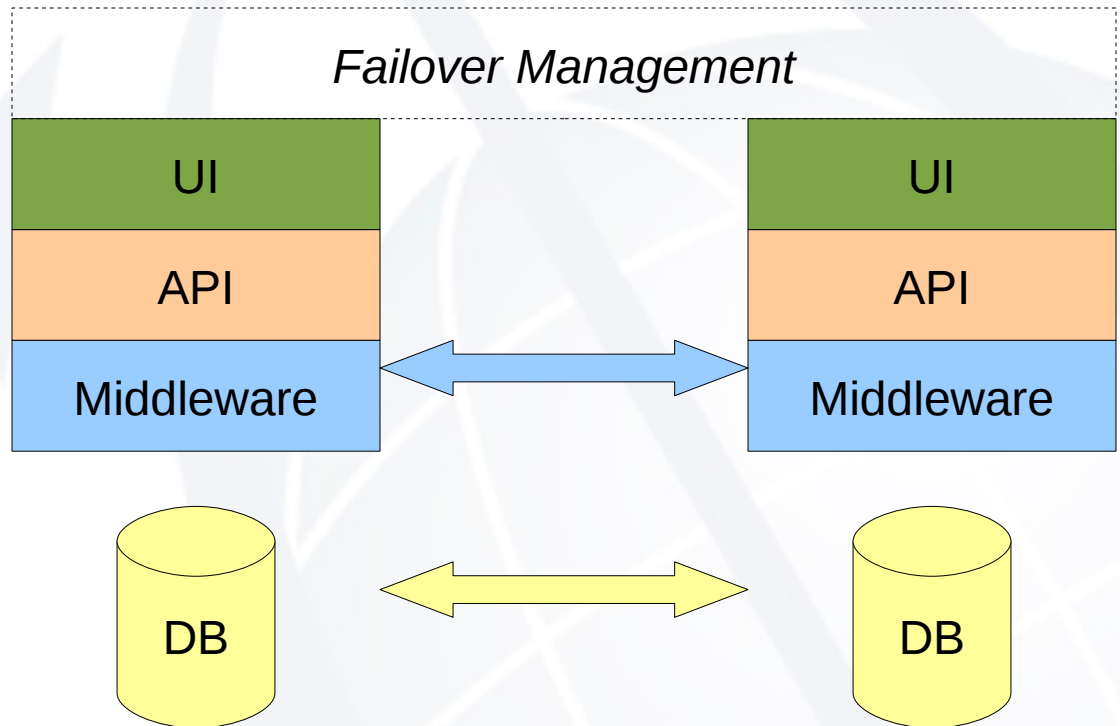
- Evaluate available tools
  - Remedy, OTRS, RT, ...
- Propose replacement tool
- Map existing processes to new tool
- Amend tool / processes to match
- Plan migration to new tool
- Decommission old tool

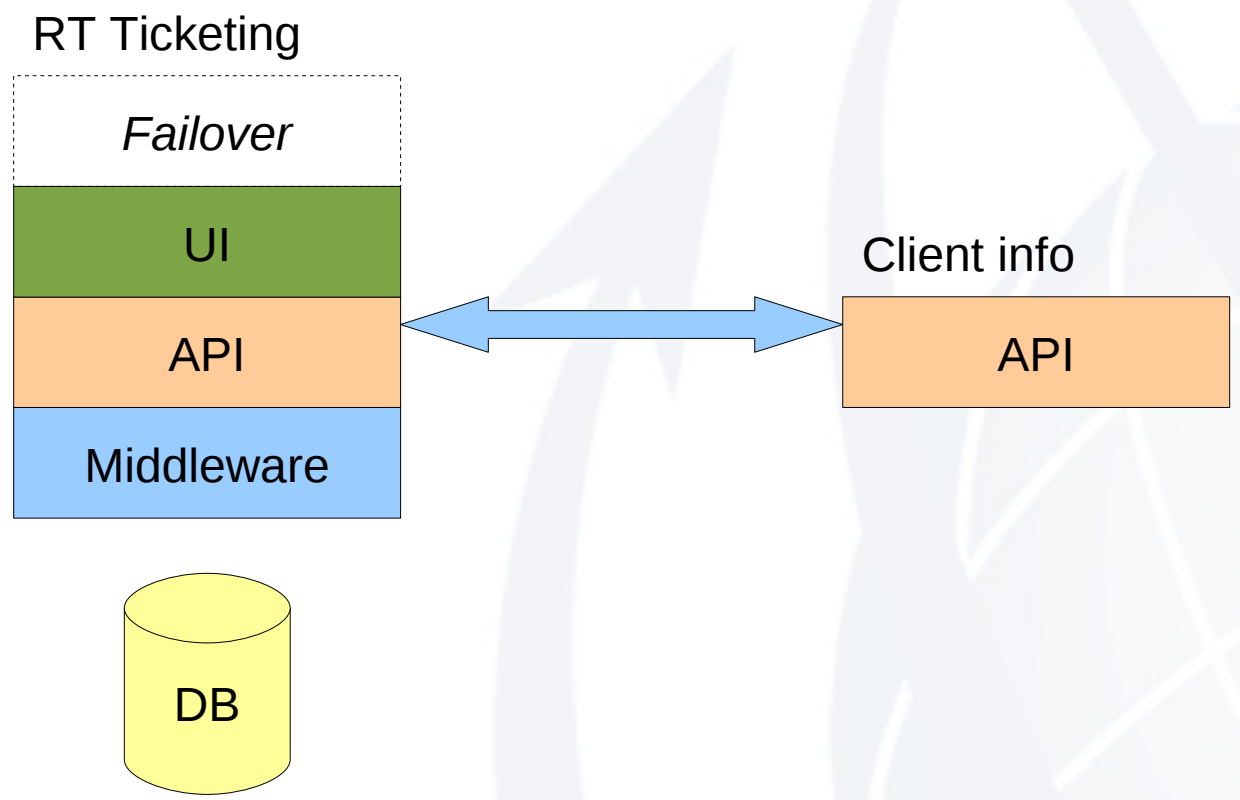
- No external facing change
- Federated auth, with bypass
- **Integration** with existing datasets
- Integration with monitoring systems
- **Standalone** capable
- **Resilient**
- DR plan (#2 item for reinstatement)
- Scalable, supportable, maintainable

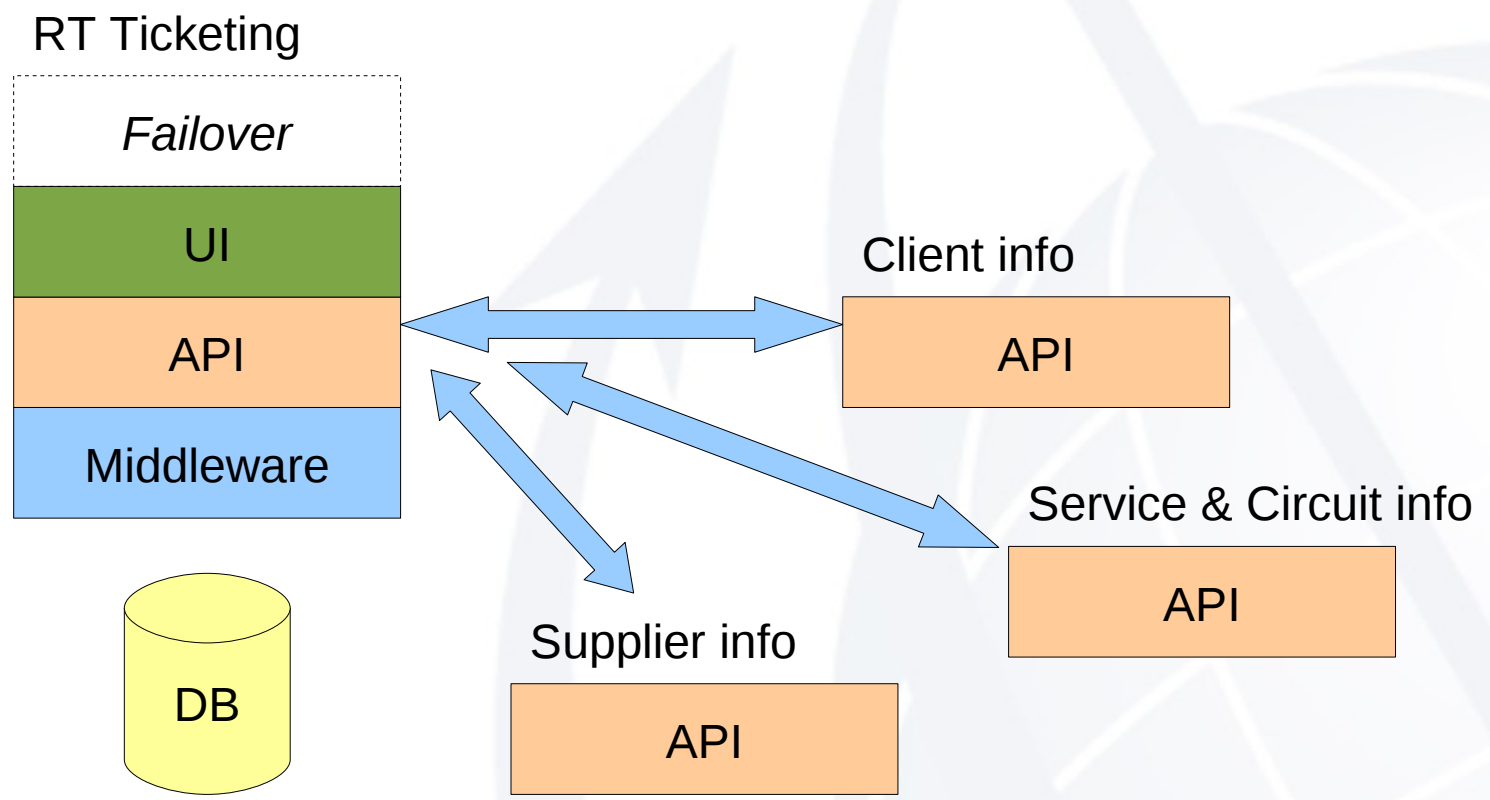


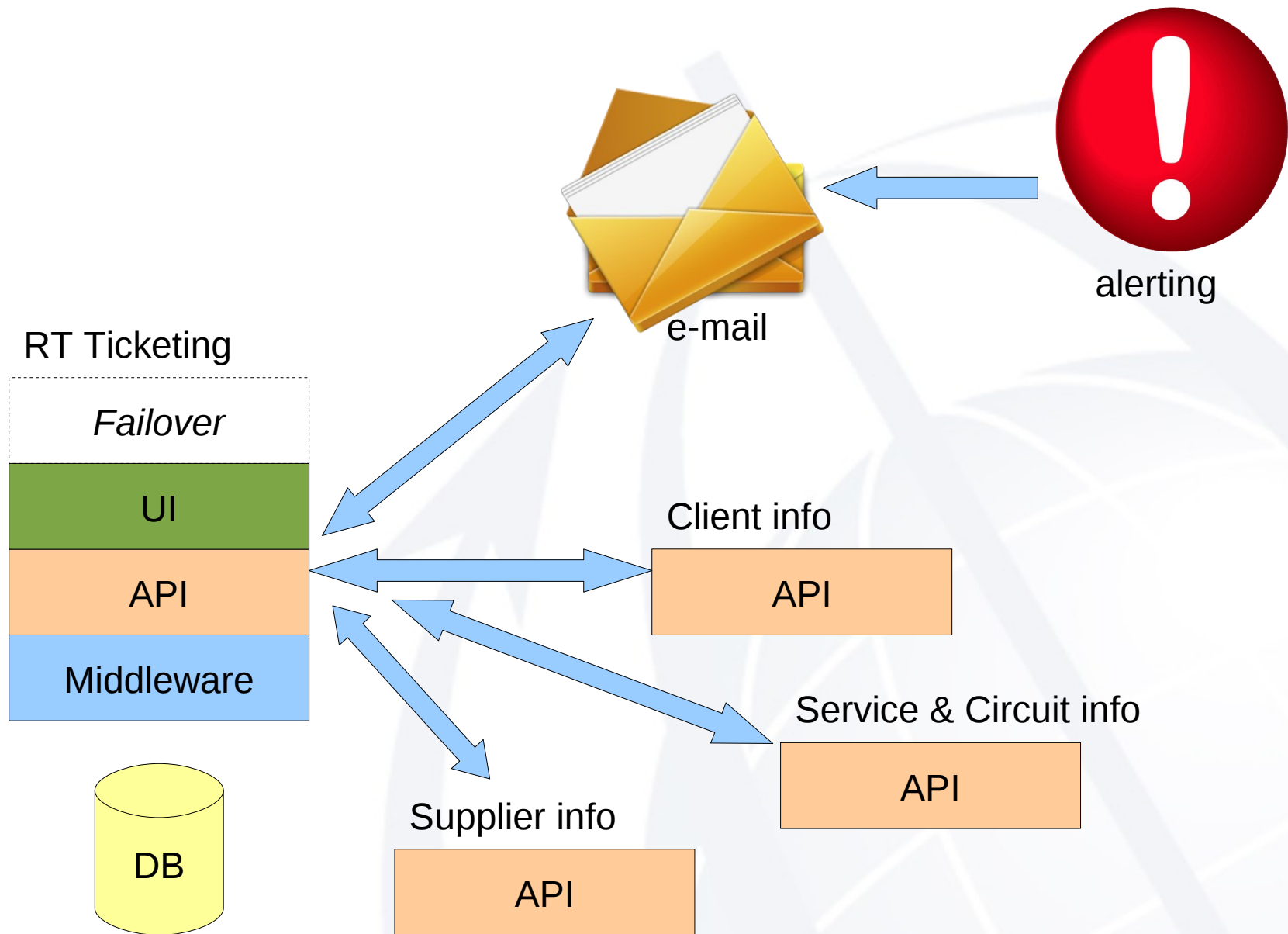
- Automation & Aggregation
  - Automate what we can
  - Facilitate everything else
- Ensure clear, well understood, robust procedures are
  - **in place** and
  - will be **followed / enabled**
- **Leverage Upgrades** in Core RT

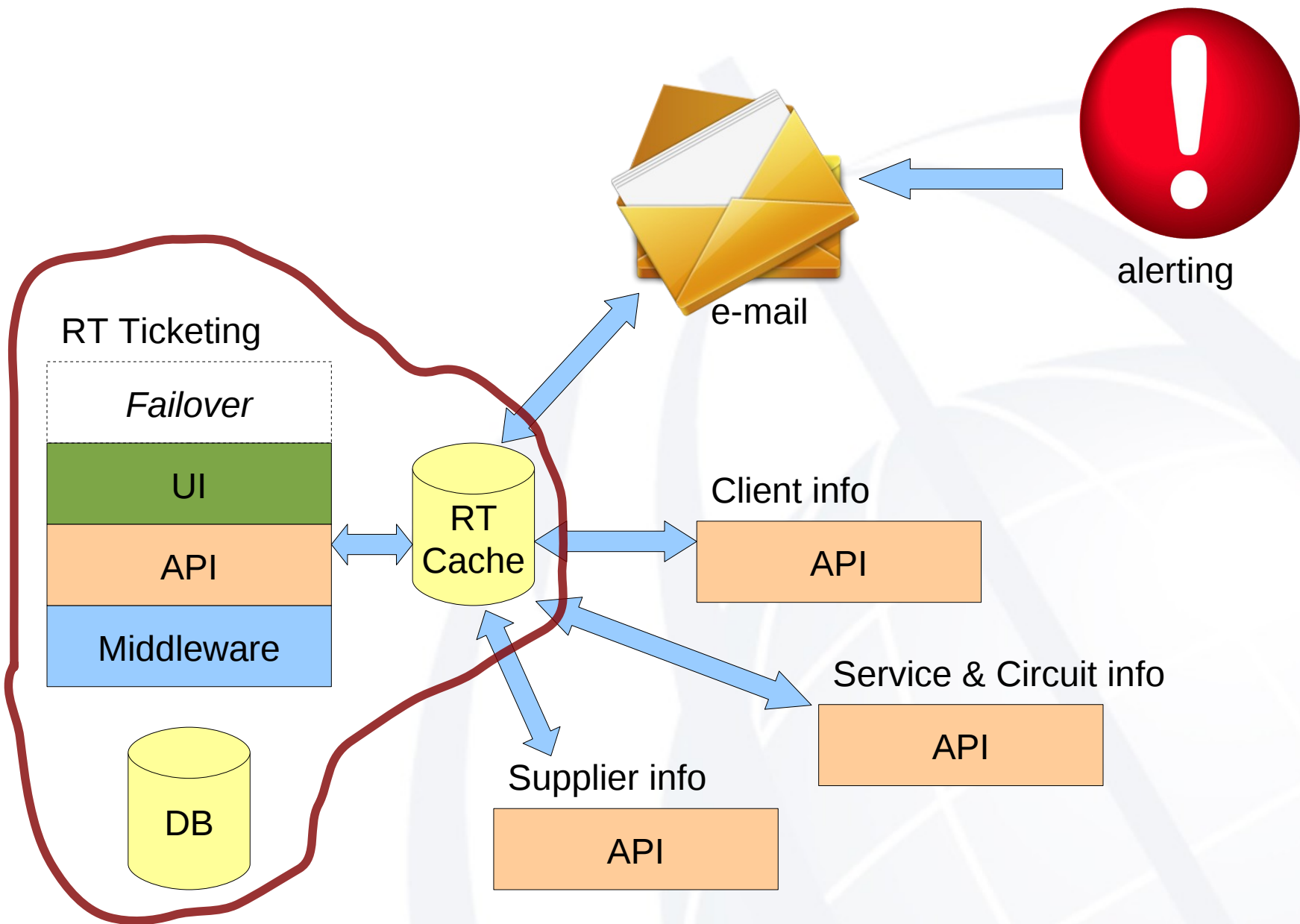
- Two separate data centres
- API for integration









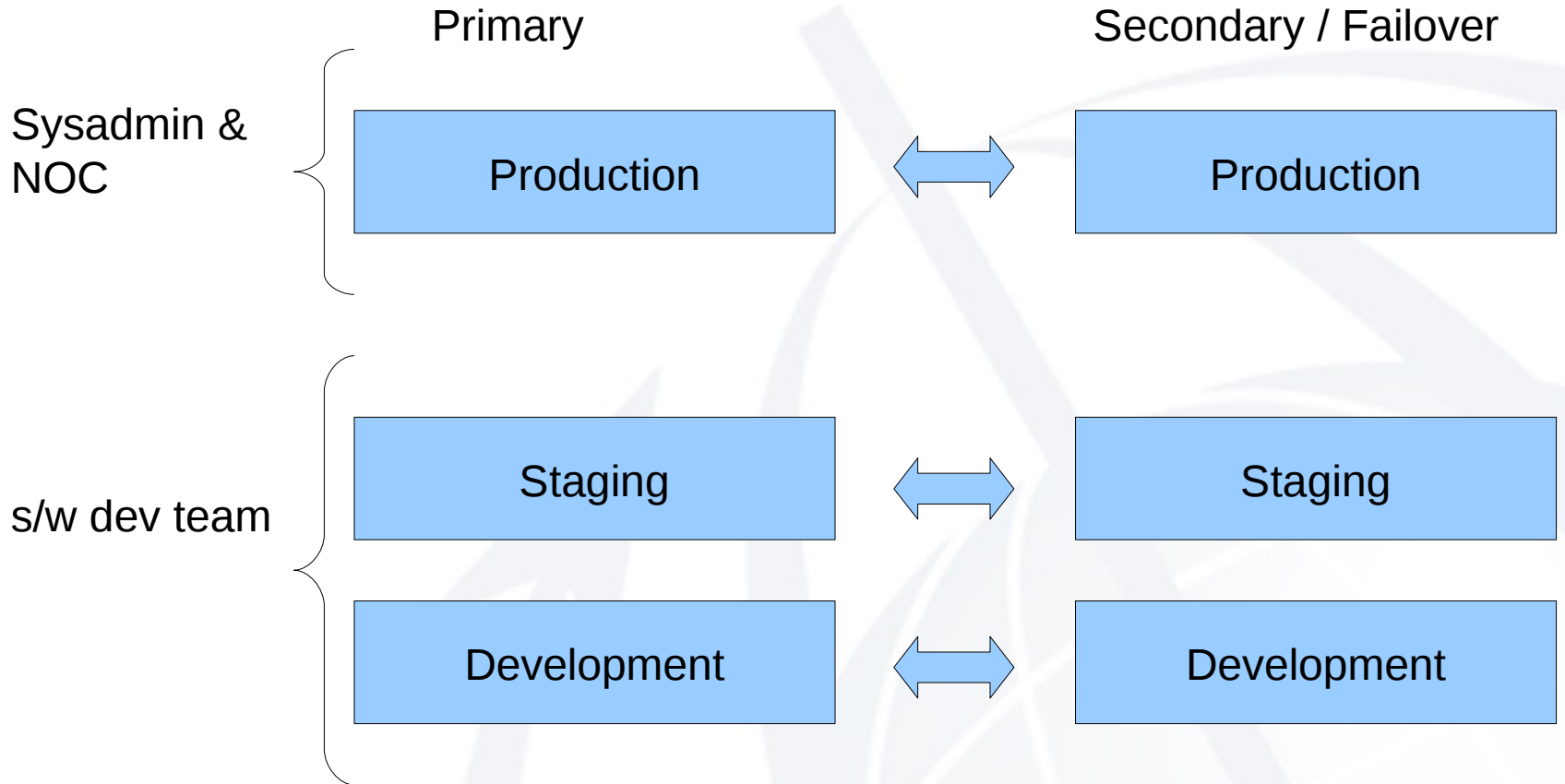


- Management buy-in
  - Reporting
  - Better customer service
- NOC buy-in
  - Easier to track incidents
  - Better integration makes life easier
- Client buy-in
  - Looks the same, but better service

- NOC involved from day #1
- Suggestions tracked
  - Fogbugz
- 3-month migration from old to new
  - 5<sup>th</sup> April 2011 (go-live)
  - 1<sup>st</sup> July 2011 (turn off mousetrap)

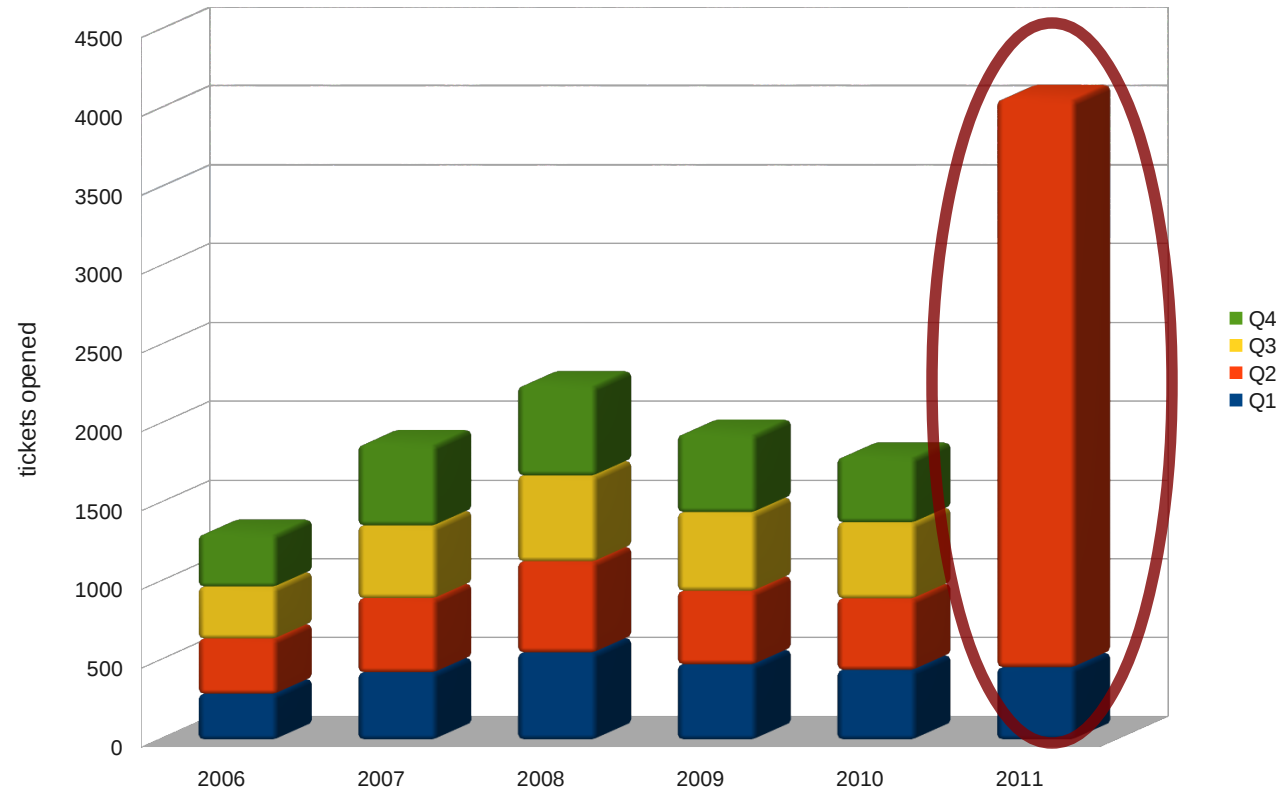


- E-mail filters
- RT interface
  - Agile methodology
  - Multiple releases since 5<sup>th</sup> April
- AssetDB launched 28<sup>th</sup> June 2011
  - Plan for integration

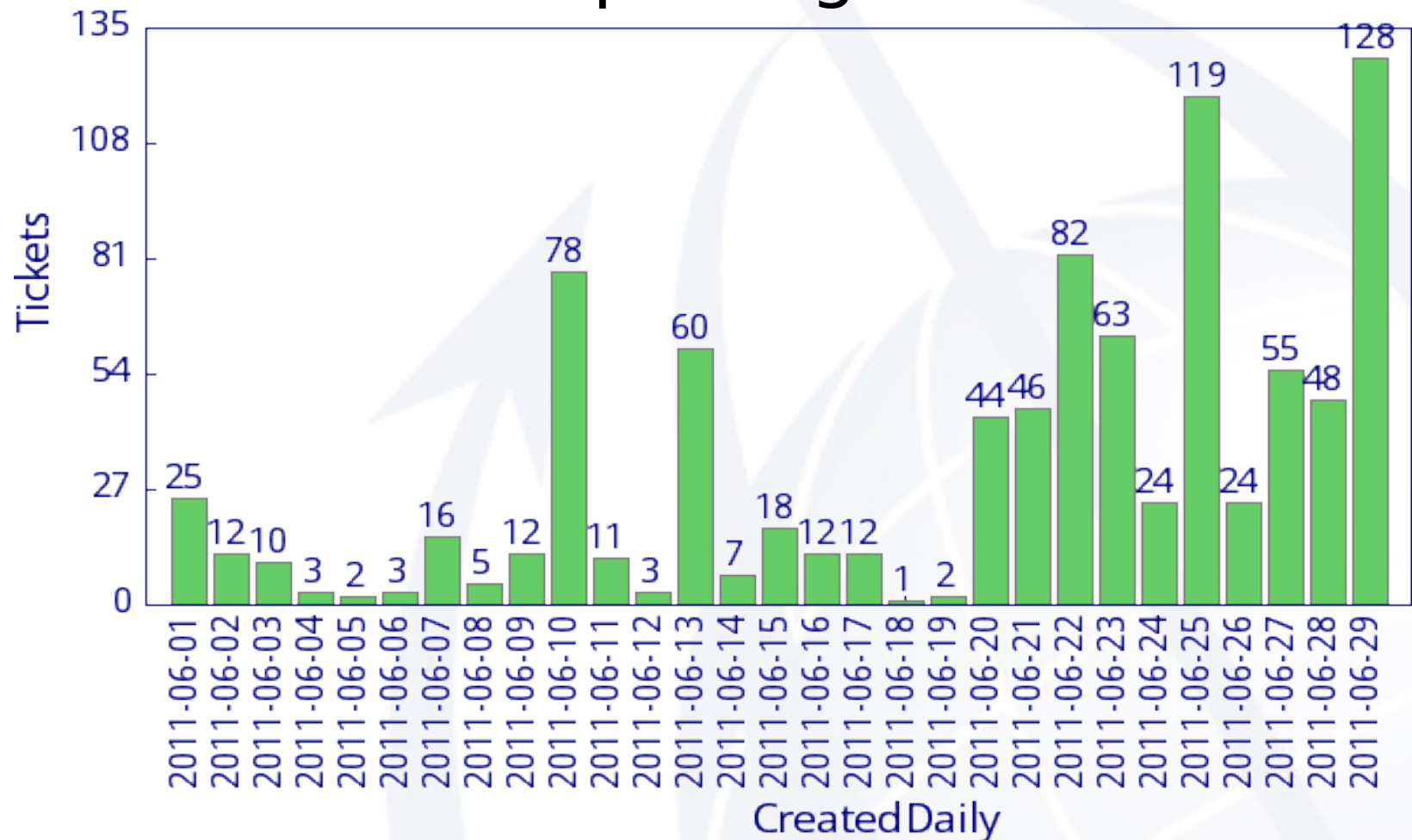


- Much better issue tracking
- More tickets

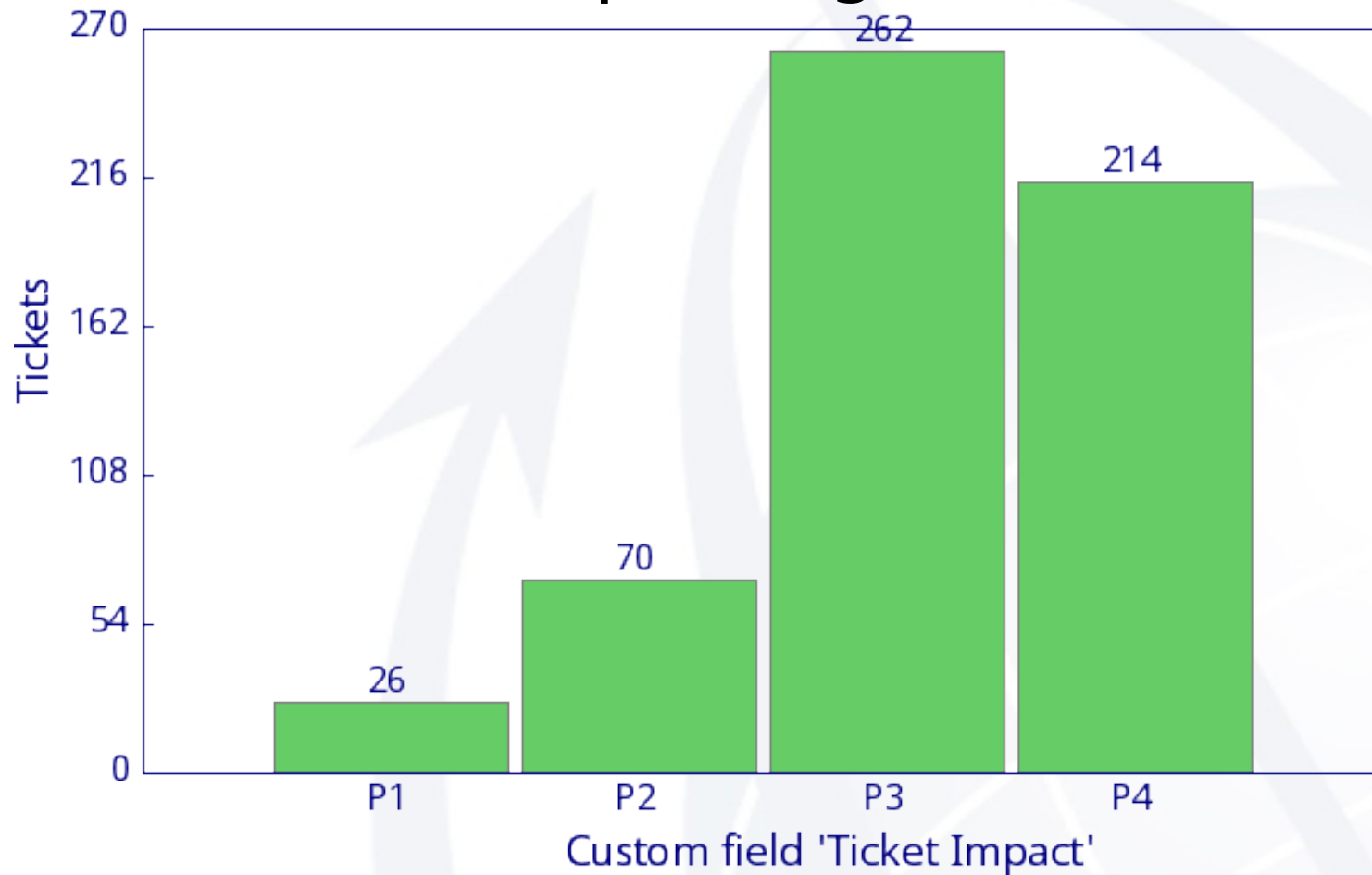
Network Operation Centre Tickets



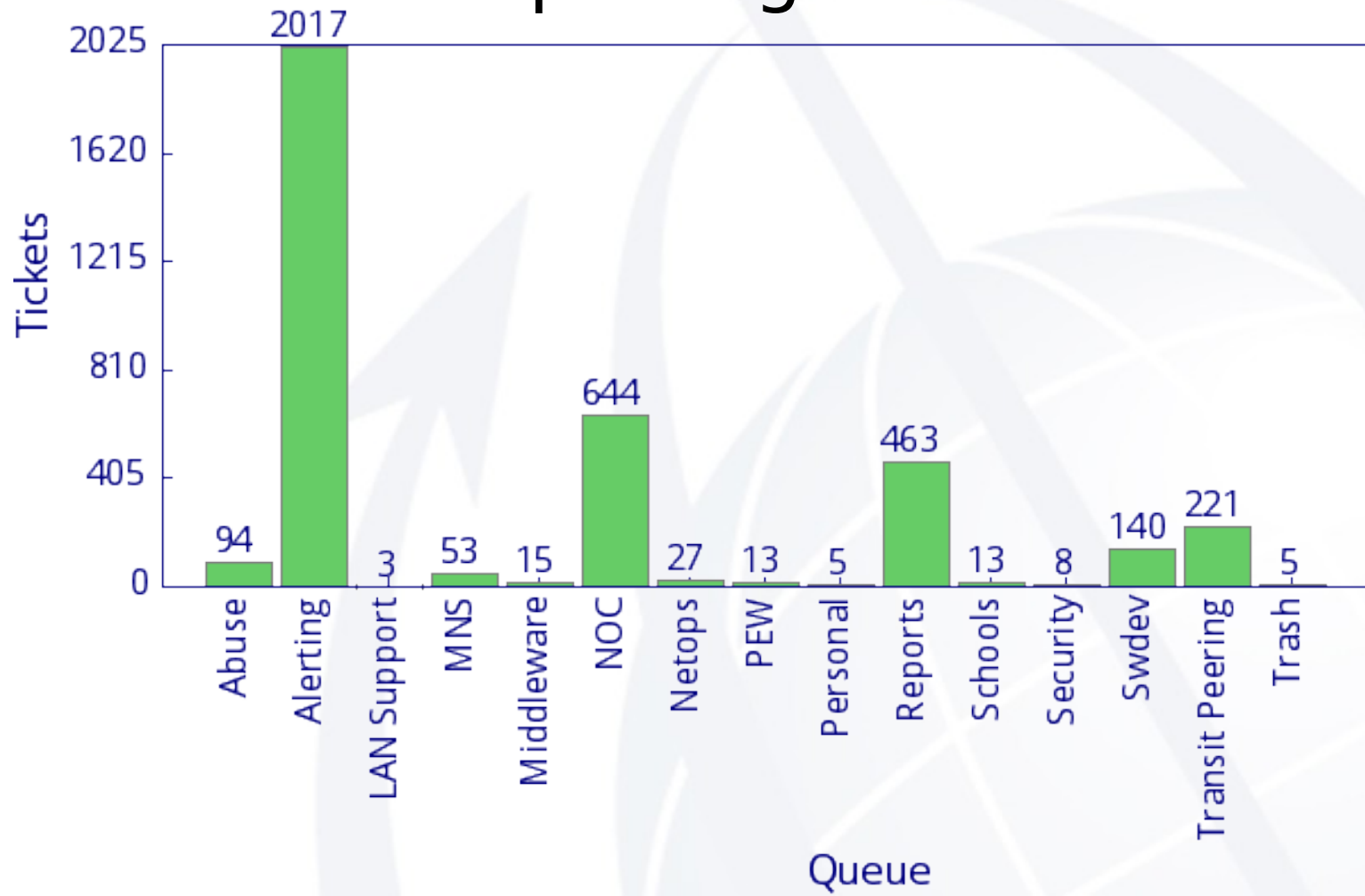
- Much better reporting



- Much better reporting



- Much better reporting



- Good incident management =>  
**Good customer service**
- **Good process** is key
- Tool must **support the process**
- **Integration** is key
- **Automation** is great
- **Reporting** is vital

- Have a **DR plan** (Disaster Recovery)
- Test it
- Break stuff, and test it again
- Test it some more
- Test it again

**How do you manage incidents if they break the tool?**



- Support the process
- Integrate
- Automate
- Report
- Leverage community development
- Have a DR plan
- Test, test, test some more!