



# COMMUNITY SUMMIT

## POWER PLATFORM

Orlando, FL  
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The largest Microsoft Business Applications user conference on the planet.



# | 10 Things I Wish I Knew About Power Automate When I Started

A Dynamics–First,  
'For User, By User'  
Event.



# | Agenda




- Introductions
- Foundation Best Practices
- Technical Excellence
- Architecture and Operations
- Mastery & Wrap Up

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# Foundation Best Practices

# Foundation Best Practices

- Environment Strategy
- Naming Conventions
- Error Handling

# Environment Strategy

- Don't build everything in the default environment
- Create Dev, Test, and Prod environments
- Create solution-aware flows
- Easy step to ALM

# Naming Conventions

- Start every action with WHAT it does TO what

SharePoint Get Pending Invoices

Email Send Approval To Manager

SQL Update Customer Status

- Variables tell their own type


- strInvoiceNumber

- intDaysOverdue

- arrPendingApprovals

- boolsApproved

*Ask yourself, "Can someone understand my broken flow at 3:00 AM?"*

 Golden rule: *"Someone should understand what your flow does by reading ONLY the action names in the run history"*



# Error Handling

- Wrap risky operations in Try-Catch Scopes

TRY SCOPE { → API calls, Database ops, Calculations }

CATCH SCOPE (on failure) { → Log error, Use default value, Notify admin }

FINALLY SCOPE (always) { → Complete the business process regardless }

- Configure “Run After” for Graceful Degradation

Failed doesn't mean stop, it means handle it!

Why? Partial success is better than complete failure

- Every error needs an owner

Silent failures are ticking time bombs

⚠ *The million-dollar question, “If your flow failed right now, how long until someone notices?”*

**Technical Excellence**

# Technical Excellence

- Expression Functions
- Connections and Authentication
- Performance Optimization

# Expression Functions

- The mighty 4:
  - `coalesce()` – null handler
  - `formatDate()` – date tamer
  - `xpath()` – xml parser
  - `chunk()` – batch processor
  - `union()+intersection()` – array magic

# Connections and Authentication

- Service Accounts are not optional
  - `john@` → `svc-powerautomate@`
  - *"Jobs are temporary, flows are forever"*
- Always referenced
  - Hard-coded ID → Connection reference
  - *"Build once, deploy everywhere"*
- Always Shared
  - Single owner → Team/Group ownership
  - *"The best time to fix connections is before someone quits"*



# Performance Optimization

- Parallelize
  - Concurrency: OFF → ON (50)
  - Result: 15x faster
- Filter Early
  - 10000 records → 10 records at the source
  - Result: 99% less processing
- Select Minimal
  - 50 columns → 2 columns
  - Result: 25x faster

# **Architecture and Operations**

# Architecture and Operations

- Modular design with Child Flows
- Testing and Debugging
- Governance and Documentation

# Modular Design with Child Flows

- Do not replicate the same logic across 10 flows
  - 1 child flow called by 10 parents
  - Fix once = Fixed everywhere
- 200 Actions = Unmaintainable!
  - Monolithic: 1 flow, 200 actions
  - Modular: 1 parent + 5 child flows
  - Debugging time: 5 hours → 30 minutes
- Test Isolation
  - Child flows = independent testing
  - No need to run entire process
  - Bug in step 47? Test just that child flow

# Testing and Debugging

- Static Results = Safe Testing
  - Configure test data without triggering real systems
  - No emails sent, no data modified
  - Best way to conduct production testing
- Compose Actions = Your console.log
  - Add Compose after complex expressions
  - See actual values during execution
  - Remove when stable (or leave for future you)
- Flow Checker = Pre-flight Check
  - Yellow warnings today = Red errors tomorrow
  - Fix all warnings before production
  - 0 warnings = 90% fewer failures



# Governance and Documentation

- Future You is a Stranger
  - Document WHY, not just WHAT
  - "Multiplies by 1.1 for tax (rate as of 2025 Q1)
  - 6 months later: Thank you, past me!
- Description field = Your README
  - Purpose | Owner | Dependencies | Last Review
  - 30 seconds to write = 30 minutes saved later
  - Empty description = technical debt
- Co-Owners Before Crisis
  - Single owner = Single point of failure
  - Add team/group as co-owner DAY ONE
  - Vacation doesn't break production





# **Mastery & Wrap Up**

# Mastery & Wrap Up

- Platform Limits
- Key Take-aways





# Platform Limits

- Run History: 30 Days

-  Day 1 – 30:  Visible
-  Day 31+ :  Deleted

Action: Archive important runs externally

- Timeout for HTTP triggers is 5 minutes

-  0 – 5 min:  Running
-  5+ min:  Timeout

Action: Use async pattern for long processes

- Loops: 100K Max

-  <100,000  Works
-  >100,000  Stops


Action: Paginate or filter at source

# Other Limits to Remember


- 3 MB per variable
- 6,000 API calls / 5 min
- 100 MB message size
- 500 actions recommended max




# Key take-aways

-  "Build for the Worst Day, not the Best Day"
  - Your flows WILL face:
    - ✗ People leaving the company
    - ✗ Data that doesn't match expectations
    - ✗ Volumes you didn't anticipate
    - ✗ Failures at 3 AM on a Sunday
  - Build accordingly:
    - ✓ Service accounts, not personal
    - ✓ Error handling on EVERY flow
    - ✓ Performance optimization from DAY ONE!
- Your Action: Go back Monday and add error handling to just **ONE** critical flow. That's your first win.

# Key take-aways

-  "Small Changes, Massive Impact"
  - The 80/20 rule of Power Automate: these 5 changes = 80% fewer failures:
    - ✓ Turn on Concurrency (1 click) -> 10x – 15x faster
    - ✓ Add Try-Catch Scopes (5 minutes) -> Never fails silently
    - ✓ Use service accounts (10 minutes) -> Survives employee leaving
    - ✓ Name properly (ongoing) -> Debugging in minutes, not hours
    - ✓ Document WHY (30 seconds by hand, 5 seconds with Copilot) -> Future you says thanks
  - Your Action: You don't need to rebuild everything. Start with concurrency control on your slowest flow - immediate win!

# Key take-aways

-  "You're Not Just Building Flows, You're Building Business Infrastructure"
  - The Mindset Shift:
    - ✓ From "It works on my machine" To "It works when I'm on vacation"
    - ✓ From "Quick fix in production" To "Test, document, deploy"
    - ✓ From "I'll remember what this does" To "Anyone can understand it"

Your flows run the business. Treat them like production code, not personal scripts
- Your Action: Pick your most critical flow. Ask yourself: If I won the lottery tomorrow, could someone else maintain this? If not, you know where to start.

# Suggested Resources

## Official Microsoft Resources

### Core Documentation

- [Power Automate Documentation](#) - Official docs, always start here
- [Power Automate Limits and Configuration](#) - Bookmark this! All platform limits in one place
- [Expression Functions Reference](#) - Complete list of ALL expression functions
- [OData Filter Query Syntax](#) - Master filtering at the source

### Learning Paths

- [Power Automate Learning Path](#) - Free Microsoft Learn modules
- [Power Automate in a Day](#) - Full-day workshop materials (free)
- [Advanced Power Automate Techniques](#) - Deep dive into complex scenarios

# Suggested Resources

## Templates & Tools

### Governance & Management

- [Center of Excellence Starter Kit](#) - Essential for governance at scale
- [Power Platform Admin Center](#) - Manage environments and DLP policies
- [Flow Checker Rules](#) - Understand what the checker validates

### Templates & Samples

- [Power Automate Community Templates](#) - Real flows from the community
- [Power Platform GitHub Samples](#) - Microsoft's official samples
- [PnP Power Platform Samples](#) - Community-driven examples



# Suggested Resources

## Community & Support Forums & Communities

- [Power Automate Community Forum](#) - Get answers from experts
- [Power Platform Community](#) - Broader Power Platform discussions
- [Reddit r/PowerAutomate](#) - Informal help and discussions
- [Stack Overflow - Power Automate](#) - Technical Q&A

## Blogs & Experts to Follow

- [Matthew Devaney's Blog](#) - Excellent tutorials and patterns
- [April Dunnam's Blog](#) - Power Platform expertise
- [Daniel Christian's Blog](#) - Advanced techniques and tips
- [Tom Riha's Blog](#) - Creative solutions and workarounds
- [Pieter Veenstra's Blog](#) - Deep technical insights

# Suggested Resources

## Video Learning

### YouTube Channels

- [Pragmatic Works](#) - Comprehensive Power Platform training
- [Reza Dorrani](#) - Step-by-step tutorials
- [Shane Young - PowerApps911](#) - Real-world scenarios
- [April Dunnam YouTube](#) - Power Platform deep dives
- [Microsoft Power Platform YouTube](#) - Official channel

### Video Courses

- [LinkedIn Learning - Power Automate](#) - Professional courses
- [Pluralsight - Power Automate Path](#) - Structured learning path

# Suggested Resources

## Essential Tools & Extensions

### Browser Extensions

- [Power Automate Helper Chrome Extension](#) - Navigate flows faster
- [JSON Formatter](#) - Essential for debugging API responses
- [ModHeader](#) - Test HTTP triggers locally

### Development Tools

- [Power Automate Desktop](#) - Free RPA tool
- [Postman](#) - Test APIs before using in flows
- [XPath Tester Online](#) - Test XPath expressions
- [Regex101](#) - Build and test regex patterns

# Suggested Resources

## Quick Reference Sheets

### Downloadable Cheat Sheets

- [Power Automate Actions Reference](#) - All connectors and actions
- [Common Expression Functions PDF](#) - Print this!
- [OData Query Cheat Sheet](#) - Master filtering

### Best Practices Guides

- [ALM for Power Platform](#) - Application lifecycle management
- [Power Platform Security Best Practices](#) - Security considerations
- [Performance Best Practices](#) - Optimization techniques

# Suggested Resources

## Session Follow-Up Resources

### Your "Monday Morning Starter Pack"

- [Environment Strategy Setup Guide](#) - Create your first dev environment
- [Service Account Setup Instructions](#) - Stop using personal accounts
- [Error Handling Pattern Library](#) - Copy-paste templates
- [Naming Convention Generator](#) - Consistent naming tool

### Troubleshooting Guides

- [Common Errors and Solutions](#) - Official troubleshooting
- [Flow Checker Errors Explained](#) - What those warnings mean
- [API Limits and Throttling](#) - Understand rate limits

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**Thank you for  
Attending!**





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