



Municipal Solutions

**Confluence: Local Government's Role in Economic
Development through Municipal Broadband**



Municipal Broadband: Asking the Right Questions

Agenda

The Right Questions

July, 2007: Asking the Right Questions when you Prepare for Wireless Internet

Key Recommendations:

1. Situational Assessment / Determining a Suitable Role for your Local Government
2. Review your Procurement Policies
3. Writing the RFI, RFP, RFQ.
4. Solicitation Notice publication
5. Pre-Submittal Conference
6. Evaluation Matrix
7. Vendor Presentations
8. Background Checks (*legal, financial, technical*)
9. Visit Operating Networks
10. Contract Terms & Conditions

For more information, contact me:

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Confluence of Platforms & Providers



- Telecommunications Act of 1996.
- Four (4) Play: Voice, Video, Data & Mobility.
- Multiple platforms & Multiple Service Providers



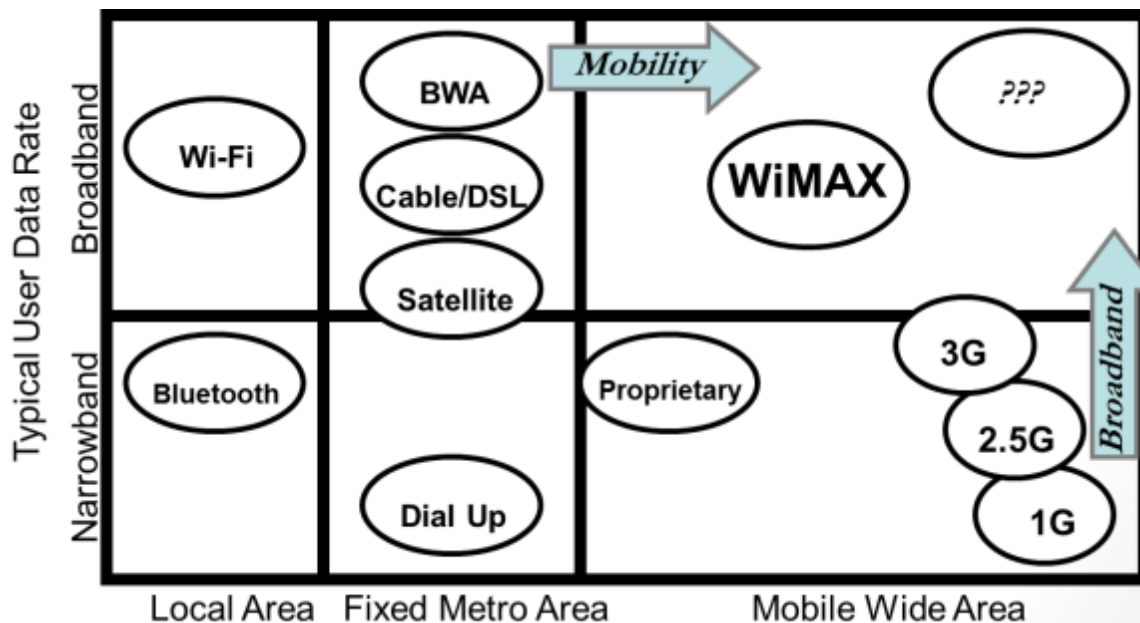
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Confluence of Wireless





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Confluence in Government

Conversation with Senator Jon Kyl (AZ):

- Senator Kyl: *“What is your opinion about Philadelphia?”*
- D. Evertsen: *“How many local governments are served by private water companies? Public?”*
- Senator Kyl: *“Quite a few.”*
- D. Evertsen: *“Which is a better model for local governments?”*
- Senator Kyl: *(with a smile) “It Depends”*

Should a municipality offer these services?

It Depends.

Primary question: Is broadband an essential service need in your community?



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Essential Services



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Essential Services

Essential Services

- Education
- Electronic banking
- Distance learning & research
- Entertainment
- Employment
- E-Commerce
- Purchasing / Supplying
- Telemedicine
- Video-conferencing
- Weather & Travel
- Premises security
- E-Government
- News
- Premises Security
- Public Safety

What communications limitations exist in your community?



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Essential Services

- 89,000 Political Subdivisions in the US
- Local Government can be defined as:
 - Cities & Towns
 - Counties
 - School Districts
 - Fire Districts
 - Utility Districts
 - Hospitals
 - Universities
- Private Sector Corporations and Governments don't speak the same language, different missions

Who is taking the leadership role in orchestrating success?



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Municipal Broadband Alternatives



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Municipal Broadband Alternatives



Which model enables?



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Municipal Broadband Alternatives



$$2^2$$
$$2 \times 2 = 4$$



$$3^3$$
$$3 \times 3 \times 3 = 27$$



$$4^4$$
$$4 \times 4 \times 4 \times 4 = 256$$

Which model enables?



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Municipal Broadband Alternatives



5^5

$$5 \times 5 \times 5 \times 5 \times 5 = 3125$$

Which model enables? *It Depends.*



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Alternatives and Competing Perspectives

1. Federal Government (*Administration & Congress*)
2. State Governments (*Administration & Legislatures*)
3. Local Governments (*89,000*)
4. Private Industry (*Telecom, Cable & Wireless*)
5. Consumers (*Residential, Commercial & Industrial*)

Leadership is critical.

Determining a prudent role is the challenge.



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Leadership



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Leadership

Local Government Leadership: *Common Mistakes*

- Low technical / industry knowledge
- No coordinated planning
- Missed opportunities / waited too long
- Oversimplification
- Deferment of action to another local government

Mistakes can be costly – politically, financially,
economically.

How can these mistakes be avoided?



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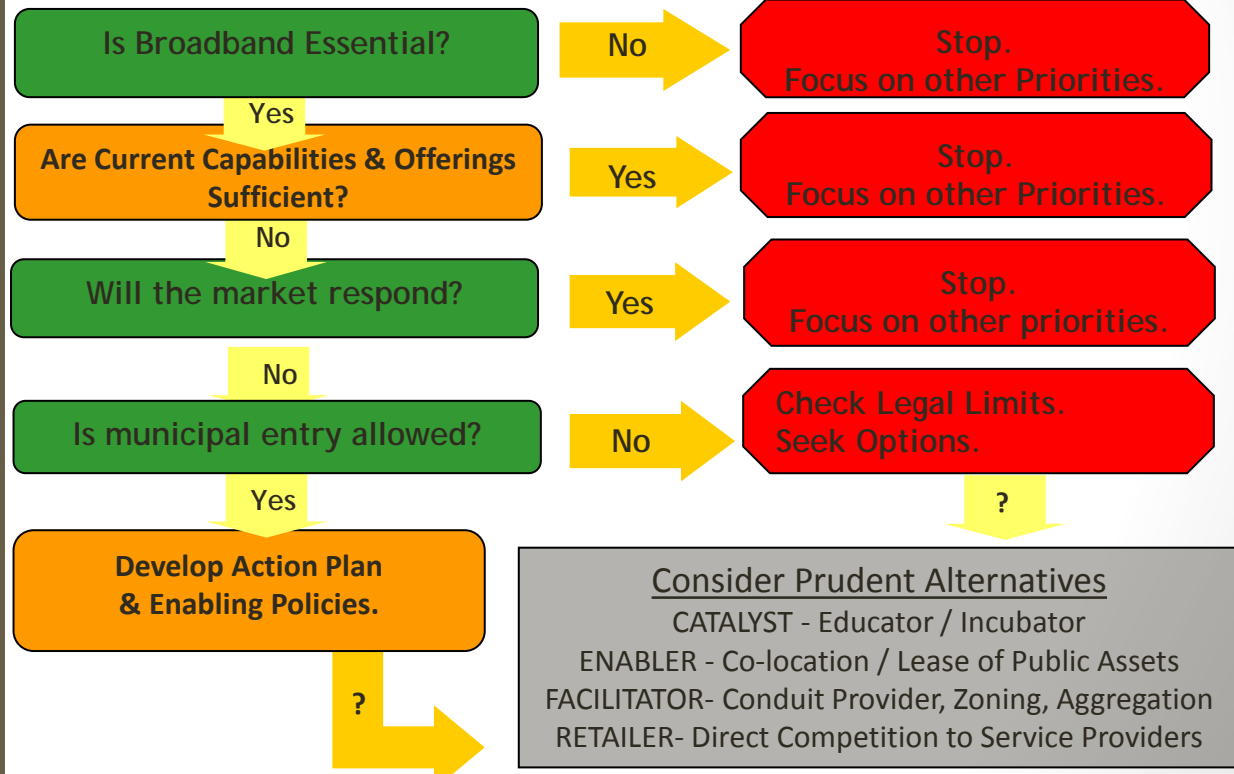
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Local Government Leadership: *Decision Process*



Sources: Municipal Solutions, 2006; ICMA IQ Report, Nov. 2004; ICMA IQ Report May, 2000.



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Local Government Leadership: *Master Planning*

1. **ASSESSMENT**: Infrastructures & Services
2. **SURVEYS**: Business & Residential
3. **SUMMITS**: Regional Public-Agencies
4. **DOCUMENT REVIEW**: Documents & Plans
5. **POLICY & STRATEGIC ACTION PLAN**

Every local government can take
a variety of leadership roles.



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1. ASSESSMENT: Infrastructures & Services

Flagstaff, AZ

Current Site #	Site Name	Status	Bandwidth	Bandwidth/VOIP	Nodes
1	Adult Center	DSL/VPN	50Mbps	100Mbps	
2	Airport Fire	City Wireless	10Mbps	100Mbps	
3	Airport Terminal	City Wireless	100Mbps	100Mbps	
4	Cemetery	Cable Modem/VPN	10Mbps	100Mbps	
5	Gagobe Activity Center	Cable Modem/VPN	10Mbps	100Mbps	
6	Good Site Utilities Shop	T1/Circuit	1800/12Mbps	1800/12Mbps	
7	Fire Station 1	Cable Modem/VPN	10Mbps	100Mbps	
8	Fire Station 2	Cable Modem/VPN	10Mbps	100Mbps	
9	Fire Station 3	Cable Modem/VPN	10Mbps	100Mbps	
10	Fire Station 4	T1/Circuit	10Mbps	100Mbps	
11	Fire Station 5	Cable Modem/VPN	10Mbps	100Mbps	
12	Fire Station 6	Cable Modem/VPN	10Mbps	100Mbps	
13	Flag Recreation Center	Cable Modem/VPN	10Mbps	100Mbps	
14	Jay Lively Ice Rink	DSL/VPN	100Mbps	100Mbps	
15	Lake Mary Water Treatment Plant	Cable Modem/VPN	100Mbps	100Mbps	
16	Landslide	City Wireless	100Mbps	100Mbps	
17	Park Maintenance	DSL/VPN	50Mbps	100Mbps	
18	Rio de Flag Plant	Compressed/VPN	100Mbps	100Mbps	
19	Warehouse				
20	Wildcat Water Treatment				





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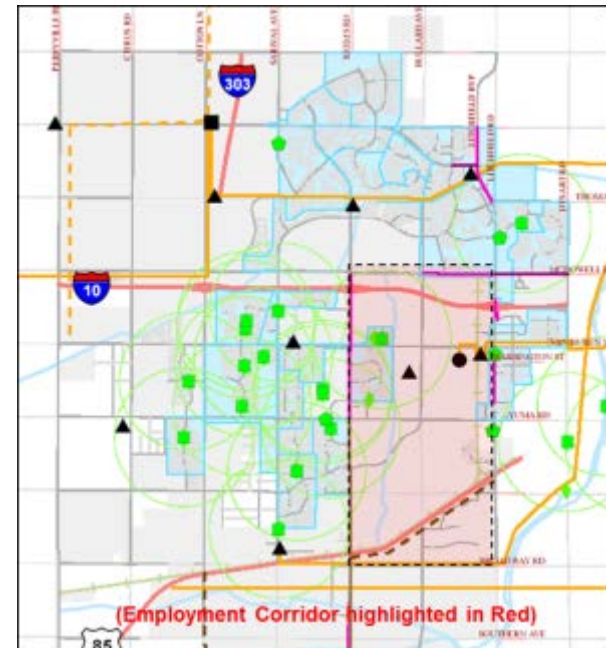
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1. ASSESSMENT: Infrastructures & Services

Goodyear, AZ





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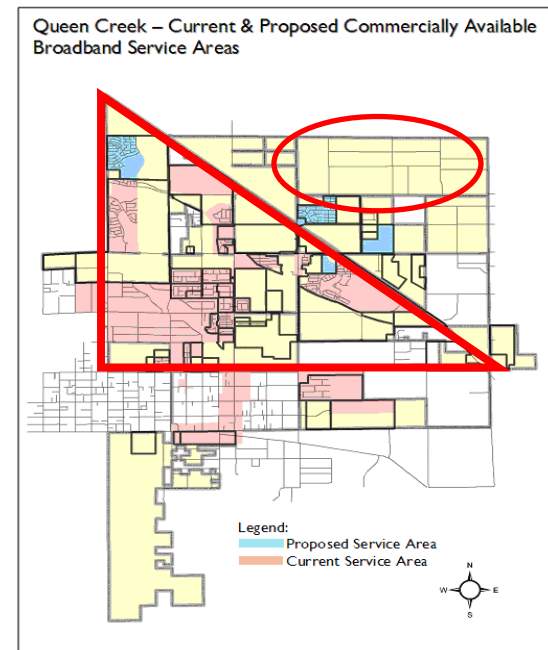
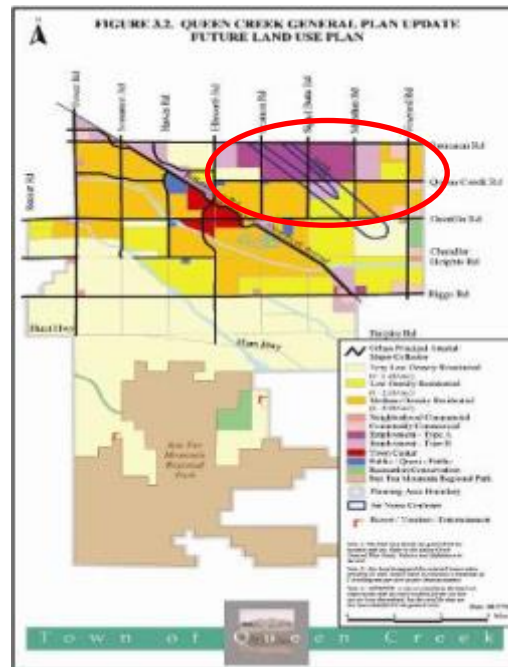
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1. ASSESSMENT: Infrastructures & Services

Queen Creek, AZ





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2. SURVEYS: Business & Residential

Internet Usage by Type

Public Records & People Searches	98%
Email / Video Communication	95%
Purchases / Sales	74%
Weather Information	73%
Local Events, News & Info	70%
News	68%
Banking / Investments	67%
Education / School	54%
Multimedia / Games	44%
Telecommuting	37%
High Volume Data Transfer	26%
Premises Security	25%
Voice over Internet / Digital Telephone	16%

Satisfaction with Local Services

Service Questions	Cable TV	Internet Services	Standard Telephone	Wireless Telephone	Service Level (Median)
Proper Response to Outages	63%	66%	83%	54%	64%
Programming Options / Variety	61%	73%	81%	77%	75%
Customer Service / Professionalism	77%	74%	81%	76%	77%
Price	37%	48%	59%	62%	54%
Reliability / Signal	79%	76%	82%	61%	77%
Variety of Local Providers	47%	56%	65%	80%	61%
Service Type (Median)	62%	69%	81%	69%	

What % of your community telecommutes?

What % of your community does not have access to broadband?

What are the levels of satisfaction with various service providers?



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3. **SUMMITS:** Regional Public-Agencies

East Valley Phoenix Metro 2007

Arizona Department of Commerce / GADA

Arizona State University – East

City of Chandler

City of Coolidge

City of Mesa

City of Tempe

Town of Florence

Town of Gilbert

Town of Queen Creek

Graham County

Maricopa Association of Governments (MAG)

Maricopa Co. Engineering Department

Maricopa Co. Dept. of Transportation

Pinal County

Queen Creek Unified School District

Salt River Project

State of Arizona

Williams Gateway Airport





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3. SUMMITS: Regional Public-Agencies

May 17th, 2007 Arizona Leadership Summit Responses

State Strategic Telecom Planning

1. Create a High Level of Awareness	20.0%	11
2. Knowledgeable Leadership	21.8%	12
3. Strategic Planning Process Design	34.6%	19
4. Practical Cost/Investment Models	23.6%	13
Totals	100.0%	55

Leadership Structures and Funding Mechanisms

1. Revolving Fund	18.9%	10
2. Grant Enablement	22.6%	12
3. Public Broadband Authority	17.0%	9
4. Public/Private Broadband Authority	41.5%	22
Totals	100.0%	53

Rights of Way

1. Appointed Authority	22.6%	12
2. Reduce Time to Market	60.4%	32
3. Raise awareness	17.0%	9
Totals	100.0%	53

Local/Regional and Tribal Planning Strategies

1. Protection with the State	15.1%	8
2. Facilitators	13.2%	7
3. Priority for Planning	39.6%	21
4. Local Control	32.1%	17
Totals	100.0%	53

Telecom Providers

1. Increase education and public awareness	14.3%	8
2. Define economic impact of Broadband	26.8%	15
3. Exclude ROW from environmental & archeological impact studies	28.6%	16
4. Legislation for authority to provide grants	30.4%	17
Totals	100.0%	56



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4. DOCUMENT REVIEW: Documents & Plans

Studies

MAG Regional Community Network (RCN) Study (2003)

Wireless Antenna Siting Study (August 1998)

Community Survey (2006)

2005 Impact Fee Study

Codes, Licenses & Ordinances

Zoning Ordinance: Article 4

Engineering Standards & Standard Details

Construction Permit Fees

Dimension / Cox Cable License Agreement

Engineering & Planning Guides

2003 – 2013 General Plan (November 2003)

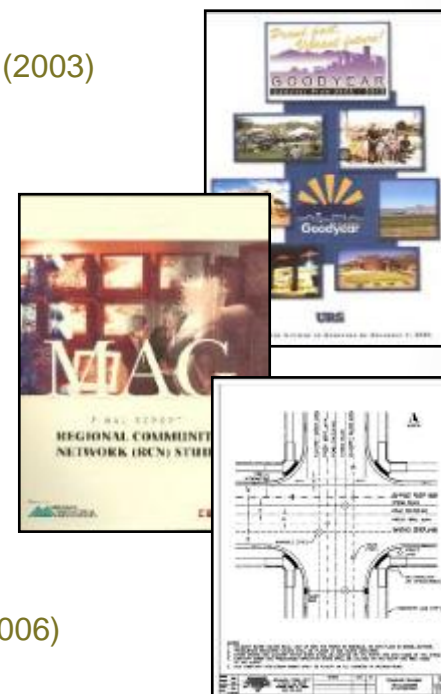
Employment Corridor Plan

Information Technology Strategic Plan (January 2006)

FY2006 / 2007 Budget

5-year Capital Improvements Program

Technology Assessment & Strategic Plan (2002)





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5. POLICY & STRATEGIC ACTION PLAN

Mission

The City of Flagstaff will use telecommunications technology to create and maintain an economically vibrant community, to provide opportunities for successful employment & business development, to ensure quality education and quality of life for all, and to gain a strategic advantage that benefits the residents, businesses, industries & schools enhancing Flagstaff's standing as a world-class City.

Vision

- Advanced Telecommunications will be of strategic importance to the City's future.
- Advanced Telecommunications infrastructure will offer City residents and businesses easy access and connectivity to worldwide information.
- Advanced Telecommunications technologies will attract an increasing share of new business to the City, providing for revenue enhancement and high quality of life.
- Advanced Telecommunications will enhance rapid, effective and efficient traffic safety, police/fire protection, and emergency response, resulting in enhanced public safety communications capabilities.



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5. POLICY & STRATEGIC ACTION PLAN

Priority	Recommended Policy / Action / Initiative	Benefit	Opportunity / Urgency	Relative Cost
1	Adopt a Telecommunications Policy and determine a formal role for City efforts towards local telecommunications enhancement within the City's unique regulatory authority.	+++	B	\$
1	Integrate Strategic Plan items in the City Manager's Work Plan, and integrate Telecommunications Strategic Planning items into the Budget and Capital Improvements Planning processes. Integrate and coordinate all departments in areas where Telecommunications issues cross departmental boundaries and functions.	+++	A	\$
1	Develop formal public agency Intergovernmental Agreements for cooperative planning and use of public infrastructure. Continue to integrate and coordinate City efforts with all other public agencies where advanced telecommunications needs cross intergovernmental boundaries.	+++	A	\$
1	Design and implement a City-wide public agency wireless (WiFi / WIMAX) internet network. Consider limited public-access.	+++	A	\$\$
2	Conduct a survey of businesses and households to determine telecommunications service quality, service needs and potential benefits of access to electronic government services.	+++	B	\$
2	Review and revise City Right-of-Way engineering, construction standards, Building Code and Zoning Ordinances to require conduit construction and dedication, high-speed drops in new structures, and fiber-to-the-curb in new development. Further evaluate and amend Economic Development Plans, General Plans & related documents.	+++	B	\$\$
2	Continue an active role on Federal and State policy involving Cable TV, Telecommunications and municipal authority.	++	B	\$
3	Design and construct local municipally-owned or public telecommunications network infrastructure where necessary to connect under-served public buildings.	++	B	\$\$
3	Promote community education and training in the benefits and use of advanced telecommunications. Provide support to GFEC and Chamber of Commerce for City-wide technology fairs or seminars on the benefits of electronic access through telecommunications.	+	C	\$\$



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Conclusion



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Conclusion: Success is Possible at the local level

1. **Create Confluence**. Take a leadership role.
2. Adopt a **Communications Policy**.
3. Start the **Communications Master Planning process**.
4. Facilitate an **Open Dialogue with multiple agencies**.
5. **Evolve Initiatives** – don't let them sit on a shelf!!!
6. **Actively Support Legislation** that preserves local authority and regulatory control over *rights-of-way*.
7. **Educate Yourself and your constituents** on the products, services and alternatives and what outcomes are to be expected.



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THANK YOU

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