



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES



Incorporating Stakeholders' Values into Ohio Deer Management: Workshop #2

Ohio Division of Wildlife: 10-Year Deer Management Plan
Workshop #2: August 3rd and 4th, 2017



Welcome back!!

Our goal for this workshop:

- Identify “performance measures,” or metrics for evaluating different deer management options and strategies.
- Specifically with regard to our fundamental objectives!

But first...

1. (Re)introduce ourselves
2. Review last workshop’s results.

Workshop Schedule

- 1:00pm: **ARRIVAL**
- 1:00-1:15pm: Introductions—what's new?
- 1:15-1:30pm: Review results of Workshop #1
- 1:30-2:00pm: **Small-group Activity #1:** Review of Summary Document & Means-Ends Network
- 2:00-2:30pm: Report from Activity #1 to Large Group
- 2:30-2:45pm: Presentation on Performance Measures
- 2:45-3:15pm: **Small-group Activity #2:** Identify Single Performance Measure: Training Exercise
- 3:15-3:45pm: Report from Activity #2 to Large Group
- 3:45-4:45pm: **Small-group Activity #3:** Identify Performance Measures for 3 Fundamental Objectives
- 4:45-5:30pm: Report from Activity #3 to Large Group
- 5:30pm: **DINNER**



(Re)Introductions

- Take a moment to re-introduce yourself to the group.
- Share any relevant news, specifically reports from constituents or stakeholders regarding Workshop #1.



Last Workshop's Results

1. What's an objective?
2. Six Fundamental Objectives for Deer Management
3. Eight Objectives for the Workshop Process
4. Means-Ends Network
5. Summary Document & Responses



What's an objective?

Objectives are concise statements about
“the things that matter!”

- A good objective consists of 1) the “**thing that matters**” and 2) a **verb** that indicates the desired direction of change.
- Objectives are *not* targets, “things to do” or principles.
- Objectives are *not* value neutral, i.e, they take a side!
- Objectives *are* context-specific.
- Objectives *may not* be easily quantifiable.



What's a *fundamental* objective and a *means* objective?

- A Fundamental objective is an objective that we can *all* agree is important and the verb is the same (i.e., to maximize or minimize)!!!
- A Means objective captures how we should go about achieving a fundamental objective. Our opinions may differ about these!



You identified 6 Fundamental Objectives

1. Improve the **balance** between hunter, farmer, landowner—and other stakeholder—satisfaction.
2. Minimize the negative **impacts** of deer.
3. Maintain a **healthy** deer population.
4. Maximize deer hunting **opportunities**.
5. Preserve the **tradition** of *deer* hunting.
6. Improve the **relationship** between Division personnel, hunters and the non-hunting public.

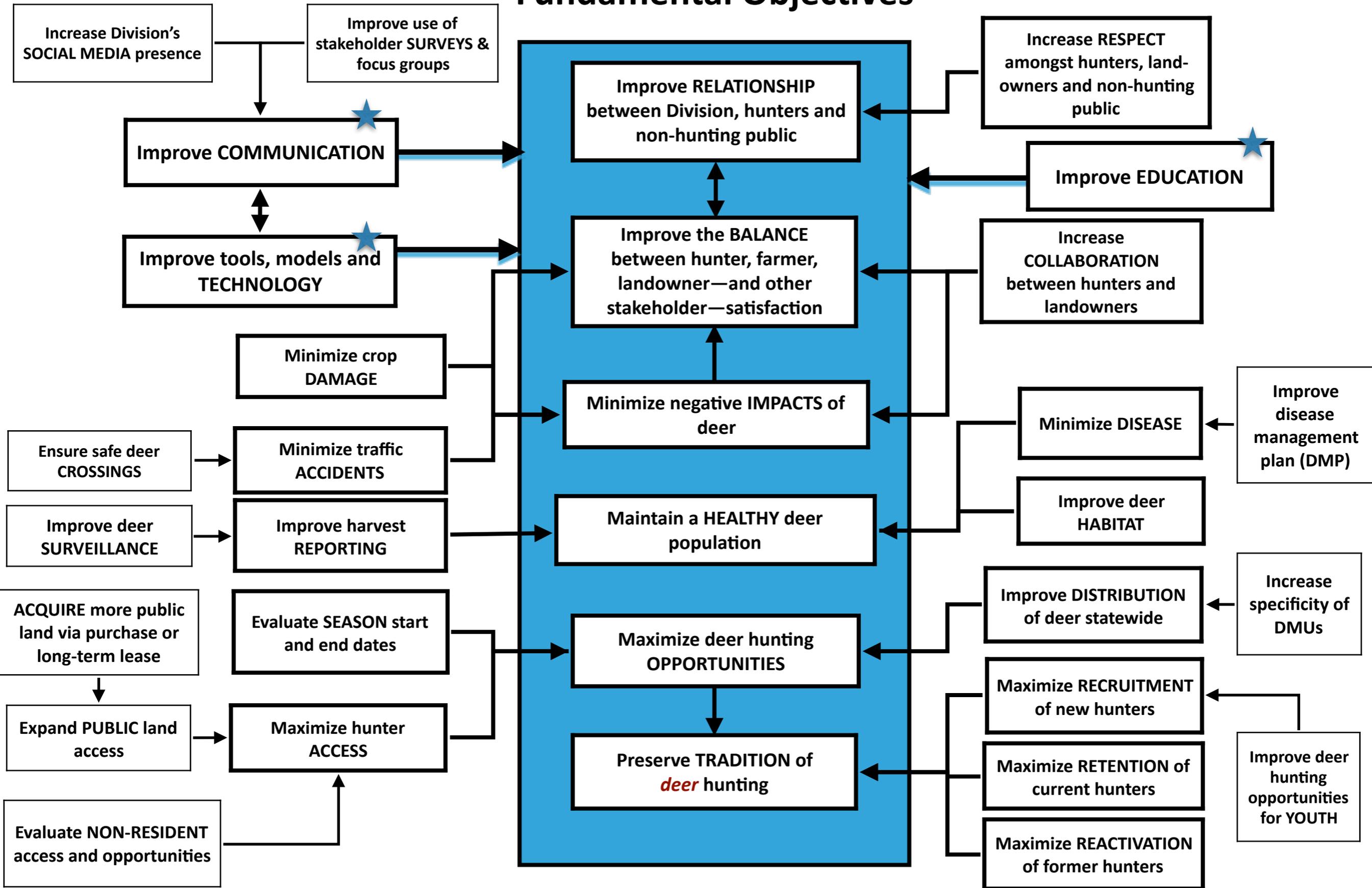


We incorporated these 6 Fundamental Objectives into a “Means-Ends Network”—along with a large number of Means Objectives.

Means Objectives

Means Objectives

Fundamental Objectives

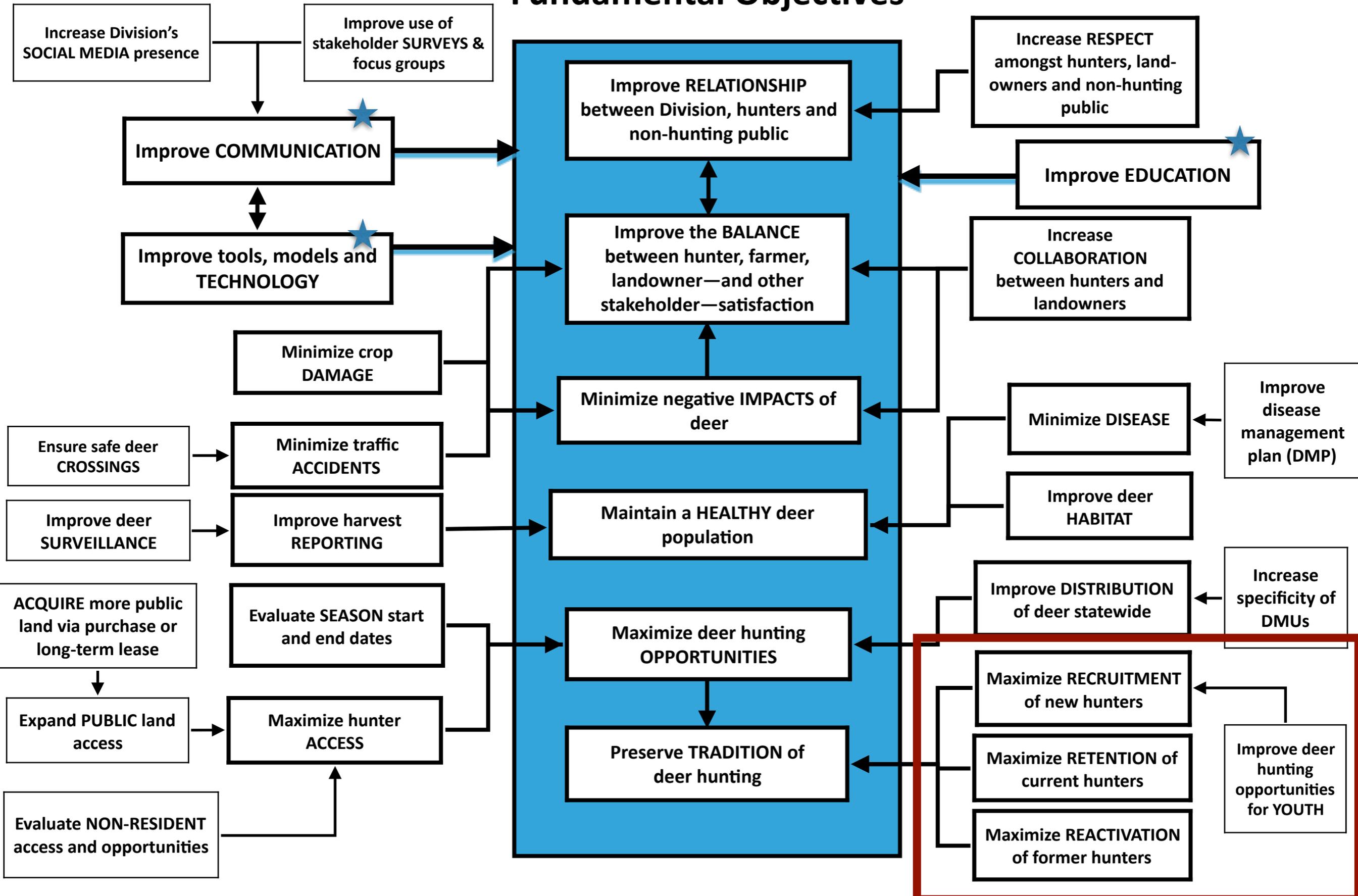


★ Objective contributes to all fundamental objectives

Means Objectives

Means Objectives

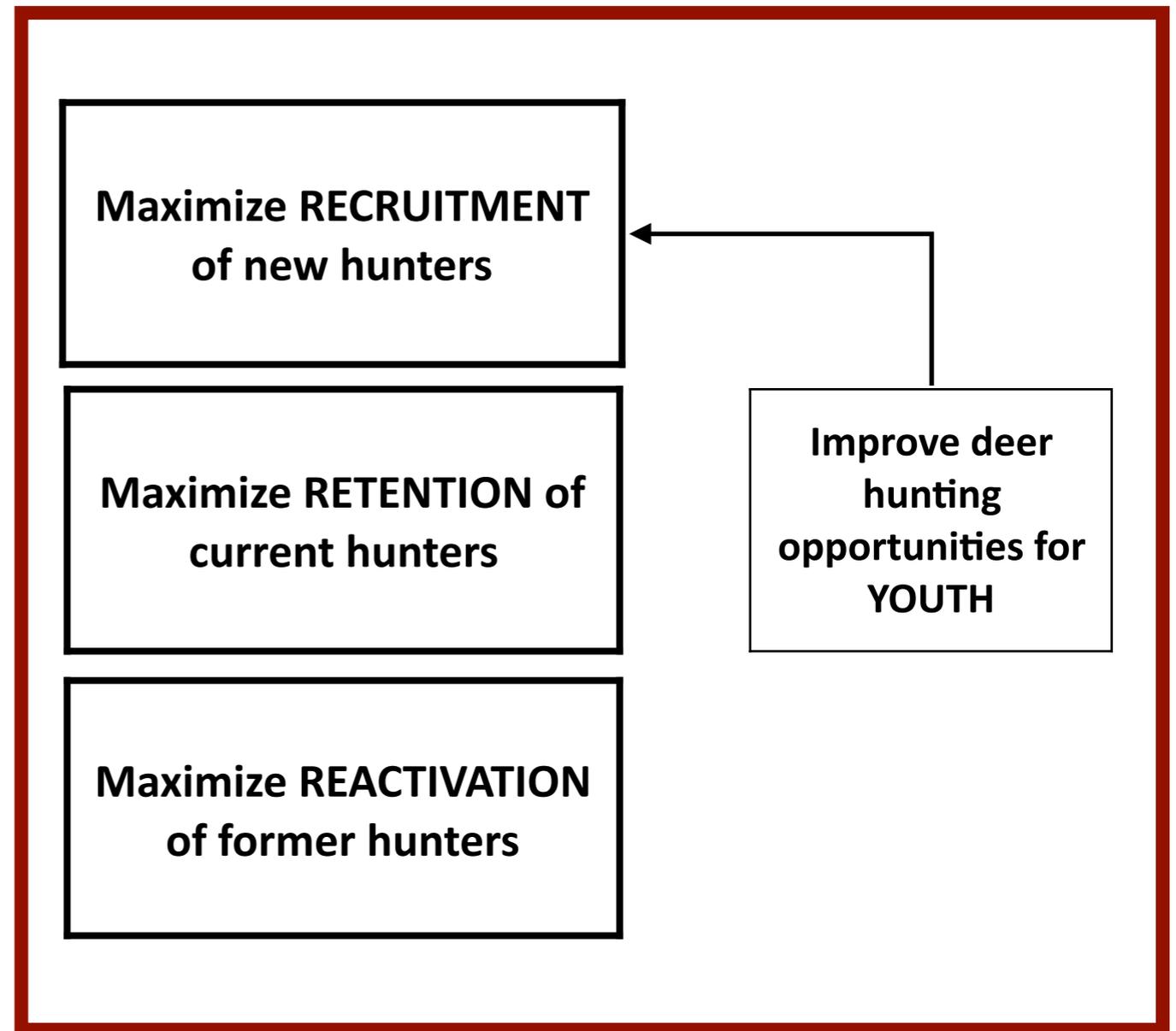
Fundamental Objectives



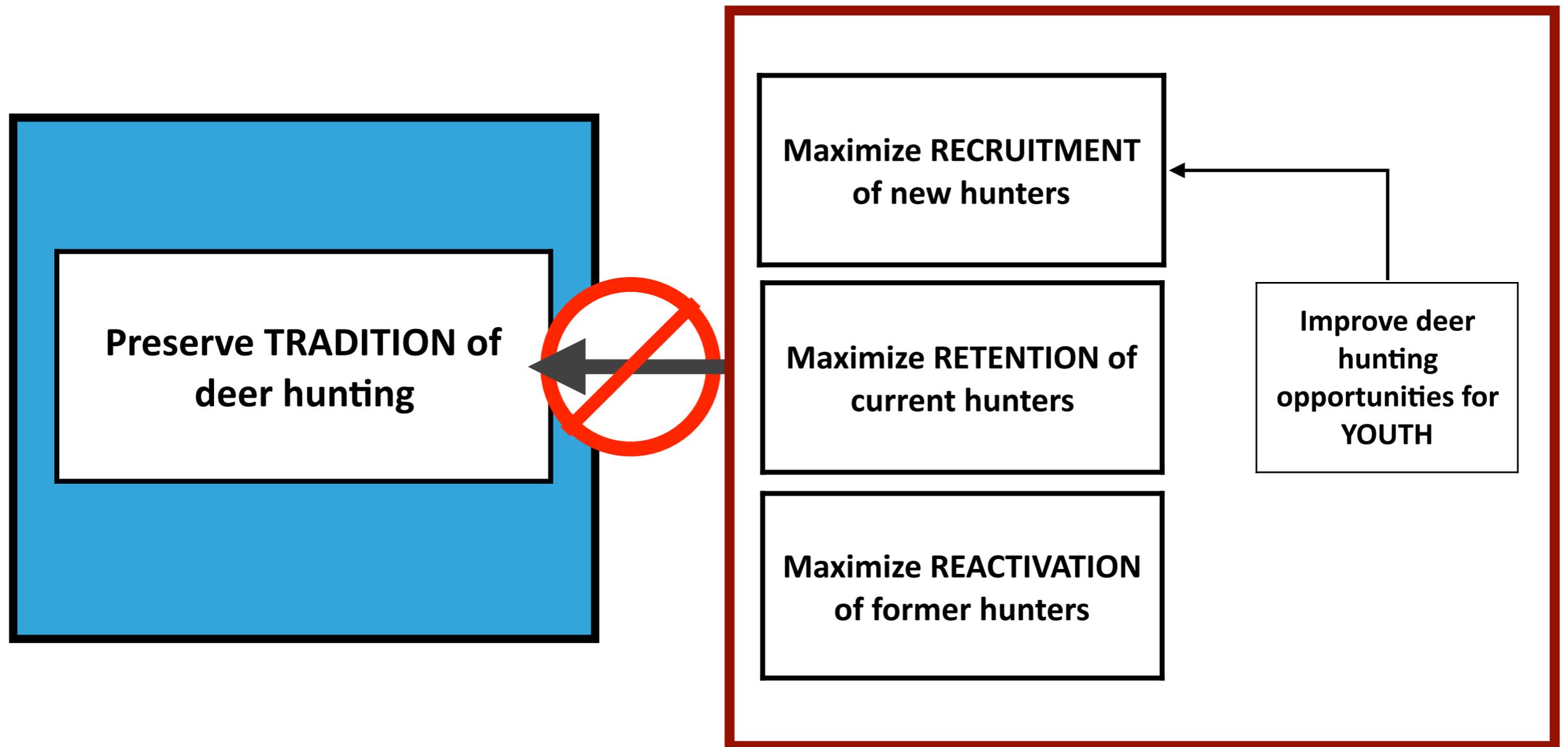
These 3 objectives are likely to be relatively insensitive to different deer management plans.

What do we mean by “insensitive”?

1. Participation rates are declining.
2. Three R's are outside this group's purview.
3. Historically the Division's decisions have had little effect on these rates.



What then do we mean by “Preserve tradition of deer hunting”?



We'll ask you to think about this in a moment.



We also identified 8 Objectives for this stakeholder engagement process.

1. Identify all stakeholders' key interests and concerns accurately.
2. Rely on the best available technology and science.
3. Ensure both its process and results are clearly communicated to all stakeholders and relevant agencies via a publicly available report and social media.
4. Demonstrate to the public the difficulties involved in deer management.



We also identified 8 Objectives for this stakeholder engagement process.

5. Create a product that provides clear deer management objectives to the Division.
6. Improve the relationship between hunters and non-hunters.
7. Provide clear means of evaluating performance, i.e., demonstrate its impact on Division deer management decisions.
8. Include more diverse stakeholder representatives and focus on the interests of young and female hunters.



All of this work went into a Summary Document

1. You each have a copy in front of you.
2. This is a working document; it will grow and evolve with the process.
3. You can—and did—respond via email, phone etc., with questions, comments, and revisions.
4. Issues raised:
 - a. Why weren't the workshop constraints listed? (*see* Section 1.2)
 - b. What do we mean by “tradition”?
 - c. What do we mean by “education”?
 - d. Where do we mean by “relationship”?
 - e. What if we don't like/agree with the means objectives?

Small-Group Activity #1

1. Introduce yourself to your small-group members.
2. Review the Summary Document & Means-Ends Network.
3. Take some time to discuss as a group what you mean by “the tradition of deer hunting.” What would it take to preserve it?
4. Report back to the main group:
 - Concerns or questions you have regarding #2, and
 - A quick definition of #3.
5. Remember that over the course of today and tomorrow we will be identifying ways of measuring performance of our fundamental objectives.
 - In doing so, we may identify additional means objectives, clarify and add nuance to our fundamental objectives—and possibly even change them.

ONE LAST NOTE:

You All Took Time Out Of Your Busy Schedules To Be Here.

You Are Here To Inform *Real* Decisions.

The More Creative And Committed You Are To The Process, *The Better Its Outcome Will Be.*

Report back to main group.

- Concerns or questions you have regarding the summary document and means-ends network, and
- A quick definition of “the tradition of deer hunting.”

The Goal of this Workshop: Identify Performance Measures

1. During the last workshop, you identified *fundamental objectives*, or those matters that were most important for you to achieve, with regard to deer management.
2. In this workshop, we will identify ways of *measuring* our success in achieving those objectives.

Remember where we are: The Five Steps of SDM

Last workshop

Step 1. Elicit values, concerns & objectives

Step 2. Devise performance measures that capture those values

Step 3. Develop options that perform well across those measures

Step 4. Engage tradeoffs between options, values and objectives

Step 5. Make & implement decisions, learn, and evaluate process

Remember where we are: The Five Steps of SDM

Step 1. Elicit values, concerns & objectives

**Today &
Tomorrow**

Step 2. Devise performance measures that capture those values

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**Next
Workshop**

The Five Steps of SDM

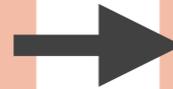
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- In this next step, we characterize measures to evaluate the performance of our objectives.
- These measures will allow us to compare the options or strategies we eventually develop in Step 3.
- These measures are often used to predict performance!
- Think about who will do the measuring.
- Remember if we can't measure it, we can't manage it!

Last workshop

Step. 1: Elicit values, concerns & objectives

For Example: Imagine having to buy plane tickets for your entire organization to visit Disney World



- Remember our objectives for that example:
 - Objective 1: We would *all* like to minimize *cost*.
 - Objective 2: We would *all* like to maximize *convenience*.
 - Objective 3: We would *all* like to maximize *safety*.
 - Objective 4: We would *all* like to maximize *directness*
 - Objective 5: We would all like to minimize *duration*.
 - Objective 6: We would *all* like to maximize *comfort*.
 - Objective 7: We would *all* like to maximize (frequent flier) *points*.

Step 2: Devise performance measures that capture those values

For Example: Imagine having to buy plane tickets for your entire organization to visit Disney World

- How might we measure these objectives?

Objectives	Performance Measures
Minimize Cost	Ticket Price
Maximize Convenience	Departure Time (AM? PM? Noon?) / % Delayed / Desired Airport
Maximize Safety	% of Flights w/o Incident
Maximize Directness	# of Connections
Minimize Duration	Total Travel Time / Flight Time / Layover Time/
Maximize Comfort	Inches of Legroom / # of Bathrooms / Plane Size / Window or Aisle Avail.
Maximize Points	# of Frequent Flier Points / Program

Step 2: Devise performance measures that capture those values

How about for our Deer Management Objectives?

- How might we measure these objectives?

Objectives	Performance Measures
Improve RELATIONSHIP between Division, hunters and non-hunting public	??
Improve the BALANCE between hunter, farmer, landowner—and other stakeholder—satisfaction	??
Minimize negative IMPACTS of deer	??
Maintain a HEALTHY deer population	??
Maximize deer hunting OPPORTUNITIES	??
Preserve TRADITION of deer hunting	??

**Step 2: Devise performance measures
that capture those values**

There are three types of performance measures:

- 1. Natural**
- 2. Proxy**
- 3. Constructed**

Step 2: Devise performance measures that capture those values

1. Natural measures directly describe outcomes with regard to objectives:

- For measuring “Increase employment,” use Number of jobs.
- For measuring “Maximize revenue,” use Dollars.
- For measuring “Reduce distance driven by participants,” use Miles driven.

Natural measures are in general use and have a *common* interpretation.

Step 2: Devise performance measures that capture those values

2. Proxy measures serve as *indirect* indicators for something that matters, but is difficult to measure:

- As a proxy for the quality of high school education, we might measure Math proficiency (using a standardized test).
- As a proxy for the health of the economy, we might use Unemployment rate.
- As a proxy for public safety, we might measure Homicide rates.

A proxy measure should correlate well with the thing that matters. But be careful! Proxies can hide non-linear relationships, mask uncertainty, and obscure value judgments.

Step 2: Devise performance measures that capture those values

3. Constructed measures are used when no suitable natural or proxy measures exist. Constructed measures report an impact directly, but use a scale that is constructed for the decision at hand:

- “On a scale of 1–7, how would you rate the quality of your natural environment?”
- “My relationship with my spouse is “1: Improving, 2: Staying the same, 3: Worsening, 4: Are you kidding me? What relationship?”

Step 2: Devise performance measures that capture those values

Another **Constructed measure** is a Defined Impact Scale:

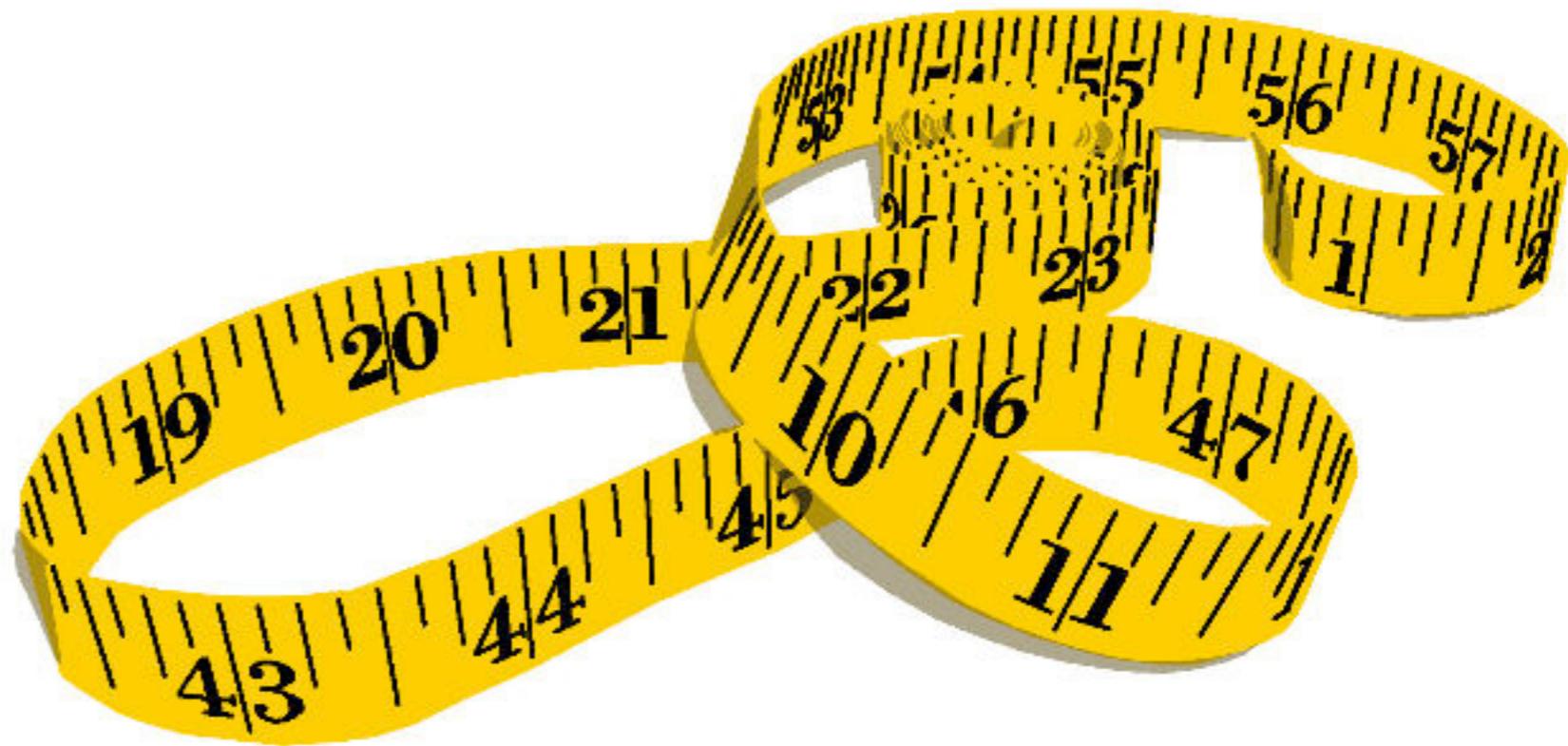
Level	Description	Value
A	No loss for any recreationist	100
B	Minor inconvenience for a small number of people (< 1000)	95
C	Significant inconvenience for a small number of people (< 1000)	50
D	Minor inconvenience for a large number of people (1000–20 000)	50
E	Significant inconvenience for large number of people (1000–20 000)	0

- Here we can see that a small number of people being significantly inconvenienced is just as bad as a large number of people experiencing a minor inconvenience.
- But maybe that's not true for us...

Step 2: Devise performance measures that capture those values

In order to work well, our performance measures need to be:

- Possible!
- Clear,
- Reliable,
- Consistent,
- Concise,
- Complete, *and*
- Communicable.



The Five Steps of SDM

Step 1: Elicit values, concerns & objectives

Step 2: Devise performance measures that capture those values

Step 3: Develop options that perform well across those measures

Step 4: Engage tradeoffs between options, values and objectives

Step 5: Make & implement decisions, learn, and evaluate process

- Remember that we will identify options or strategies at our next workshop that we will use these performance measures to evaluate and compare!

Step 5: Make & implement decisions, learn, and evaluate process

What might a Consequence Matrix for Deer Management Look Like?

Objective	Performance Measure	Options		
		A	B	C
Improve RELATIONSHIP between Division, hunters and non-hunting public	?????	?????	?????	?????
Improve the BALANCE between hunter, farmer, landowner satisfaction	?????	?????	?????	?????
Minimize negative IMPACTS of deer	?????	?????	?????	?????
Maintain a HEALTHY deer population	?????	?????	?????	?????
Maximize deer hunting OPPORTUNITIES	?????	?????	?????	?????
Preserve TRADITION of hunting	?????	?????	?????	?????

Small-Group Activity #2: A Training Exercise in Identifying Performance Measures

1. Identify *measure(s)* for evaluating a *single* fundamental objective:
 - ***Maximize Deer Hunting Opportunities.*** (Be specific!)
2. Explain *your rationale* for selecting this measure(s).
3. Identify the *source* of the information: *who* will do the measuring?
4. How much *time, money, and personnel* will the measuring require?
5. How well does the measure deal with *uncertainty*?
6. Don't forget about Means Objectives! Does identifying a performance measure identify additional means objectives? Do we need to measure those too? If so, do so! (Use another form)
7. Be ready to report back to the main group.

Report to Main Group

1. Explain *your rationale* for selecting this measure(s).
2. Identify the *source* of the information: *who* will do the measuring?
3. How much *time, money, and personnel* will the measuring require?
4. How well does the measure deal with *uncertainty*?
5. Don't forget about Means Objectives! Does identifying a performance measure identify additional means objectives? Do we need to measure those too? If so, do so!
(Use another form)

Small-Group Activity #3: Identify Performance Measure(s) for **THREE** fundamental objectives.

1. Identify a *measure(s)* for evaluating the performance of a management option with regard to each of **THREE** fundamental objectives:
2. Explain *your rationale* for selecting each measure(s).
3. Identify the *source* of the information for each measure: *who* will do the measuring?
4. How much *time, money, and personnel* will the measuring require?
5. How well does the measure deal with *uncertainty*?
6. Be ready to report back to the main group.

Report to Main Group

1. Explain *your rationale* for selecting this measure(s).
2. Identify the *source* of the information: *who* will do the measuring?
3. How much *time, money, and personnel* will the measuring require?
4. How well does the measure deal with *uncertainty*?
5. Don't forget about Means Objectives! Does identifying a performance measure identify additional means objectives? Do we need to measure those too? If so, do so!
(Use another form)