



# **CENTER CERTIFICATION RESEARCH REPORT**

2019

# Table of Contents

OVERVIEW .....	3
Background .....	4
Challenges with Existing Process .....	5
Project Timeline .....	5
CERIFICATION DATA .....	6
Lane Topography .....	6
Overall Data.....	7
Pit Measurements .....	7
Overall Data.....	7
Facility Overview .....	8
Key Findings .....	9
Spot Checks .....	9
TIERED CERTIFICATION.....	10
Ideation Group.....	10
Proprietor Group .....	11
Comparison Studies .....	12
Program Details .....	13
Eligibility .....	13
National Inspectors .....	13
Inspection Tools .....	13
Additional Announcements.....	14
Timeline .....	14
FINAL SUMMARY .....	14
Local Association Impact .....	14
Next Steps .....	15

# OVERVIEW

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In recent years, the United States Bowling Congress set out to improve center certification. USBC examined the lane certification process and published a study of 64 centers and just over 1,000 lanes across 20 states. The results of the study led to changes in the certification process, announced at the 2017 USBC Convention.

Over the past several years, an historical data collection and analysis project took place, and from the information USBC learned an enormous amount about the state of center certifications across the country. The results confirmed what the previous study identified, that a new approach is required for the future of the sport.

In this research report update, we'll look at the data collected from 2018 side by side against 2019. USBC also conducted spot-check inspections to determine the accuracy of the data collected and those findings are shared in this report.

The Equipment Specifications and Certifications team, in cooperation with the Equipment Specifications Committee, determined in its November 2018 meeting that the next steps were to evaluate alternate options, such as tiered center certification along with a deeper analysis of the certification data submitted through spot checks in the field.

It was decided at this time to bring in a third-party consultant with a background in process engineering to assist USBC in exploring a tiered certification program.

Consistent with past strategic objectives, one of the first steps was a series of focus groups with industry stakeholders who were invited to USBC to evaluate a tiered center certification program.

At the April 2019 Equipment Specifications Committee meeting, the information and research data presented gave confidence to the committee that USBC was moving in the right direction. Three areas were identified as needing additional research:

## **Tiered certification**

## **National inspectors**

## **Inspection tools**

The work continued, and as USBC created a new model, a greater emphasis was placed on how the national inspection team would manage to inspect the nearly 4,000 centers across the country. A complete rationalization of what is needed to support a tiered certification program was crafted.

USBC is examining the tools to streamline the inspection process. Additional testing of the tools will continue.

It was approved at the November 2019 Equipment Specifications Committee meeting to move forward with a tiered center certification program and no longer require the current annual lane inspections that have been performed by local association inspection teams.

As shown in the spot-check data, very few centers meet 100% of the current specifications and very few had a significant portion of the center needing corrections. The data supports creating a tiered certification that can be inclusive and flexible for centers while giving members more information about center measurements.

This report marks USBC's decision to certify all bowling centers that wish to hold certified leagues and tournaments, simply by allowing a national inspector to measure their lanes and be classified under USBC's center certification tiers.

## Background

A recent research study<sup>1</sup> was completed to evaluate the last 100-plus years in the area of center certification. During the research project, it was determined center certification and lane inspections had been a point of contention for a large portion of the previous century.

The changes to center certification announced at the 2017 USBC Convention, including the lane certification study report<sup>2</sup> published at that time, marked the first time in nearly 27 years since any real changes occurred in this area.

Prior to the announced changes, all bowling centers were required to have their lanes within specification. For the purpose of collecting the data, meeting the specification was waived and bowling centers were provided a one-year grace period while USBC analyzed the data. After seeing the first year of data, the grace period was extended to a second year.

The Lane Certification/Inspection as written in the Equipment Specifications Manual<sup>3</sup>, explains throughout section A.1 – A.4 that:

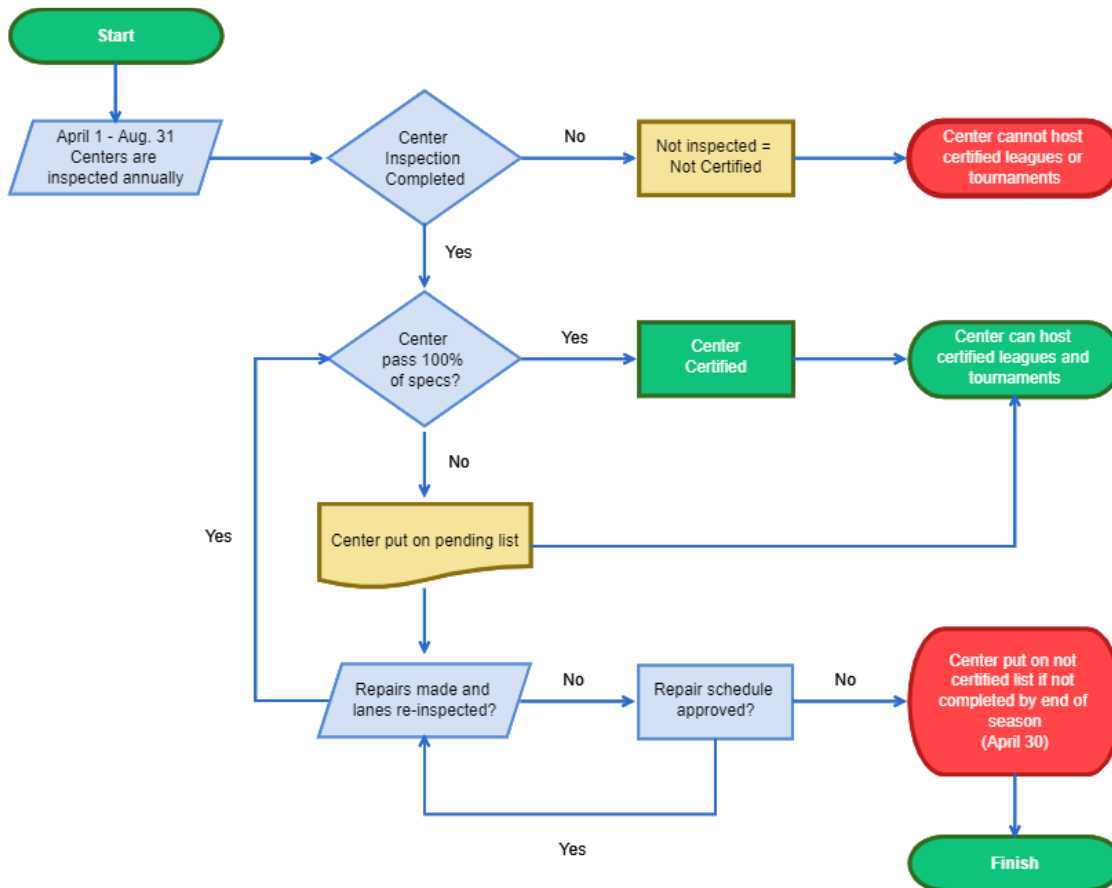
- When a bowling center requests certification, the Association Manager shall ensure an inspection is done. The lanes and equipment would be measured and inspected for compliance with physical specifications.
- Upon completion, three signatures are required from the bowling center, Association Manager and Inspector, and then the data would be sent to USBC.
- Inspections begin April 1 prior to the start of the season and no later than August 31 after the start of the season for which the certificate is to apply.
- Certificates issued shall expire on August 31 following the season for which issued, unless a noncertified center requests certification and is inspected after December 15 or a certified center resurfaces and is inspected after December 15.

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<sup>1</sup> [Center Certification Research Report 2018](#)

<sup>2</sup> [Lane Certification Study Report 2017](#)

<sup>3</sup> [Center Certification Manual](#)

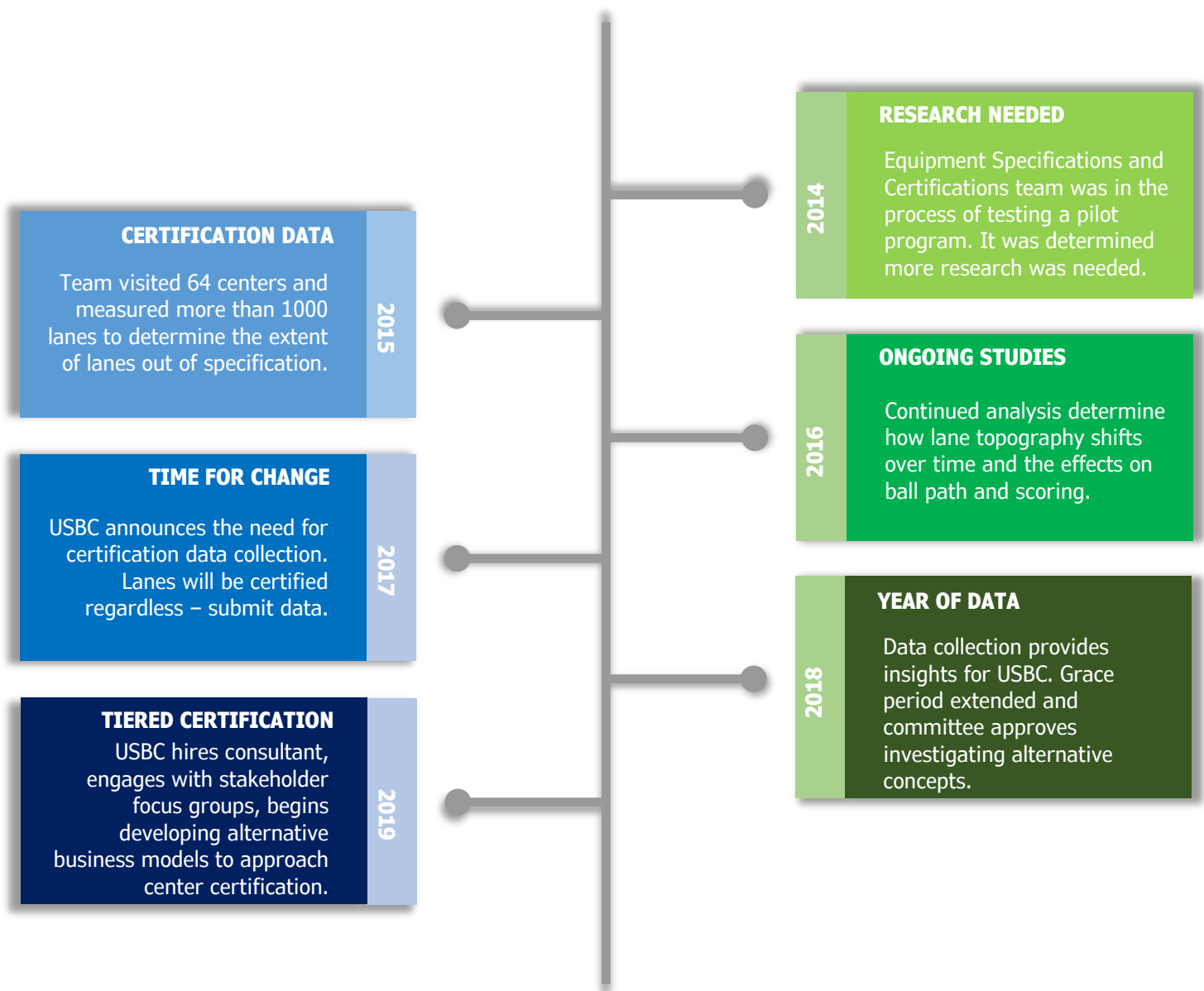


### Challenges with Existing Process

- The data collection
- Training and education
- Physically demanding
- Time and effort required of volunteers
- Consistency of inspections
- Cost of inspection tools to the local association
- Maintenance costs to centers

### Project Timeline

The United States Bowling Congress has been actively working toward a solution surrounding the future of center certification. Below is the project timeline:



## CERTIFICATION DATA

USBC local association officials over the past two seasons have visited bowling centers in their area using a variety of tools and instruments to perform a physical inspection of the lanes and their adjacent components. Below you will learn about the specific areas they inspect, the results of the data collected and spot checks that USBC performed.

### Lane Topography

Lane topography consists of measuring five panels for synthetic lanes and three locations for wood lanes. The panels measured consist of the first five panels, starting with the head panel.

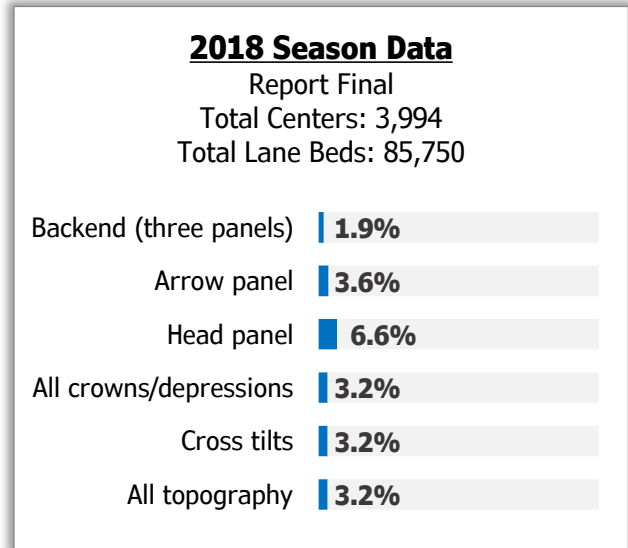
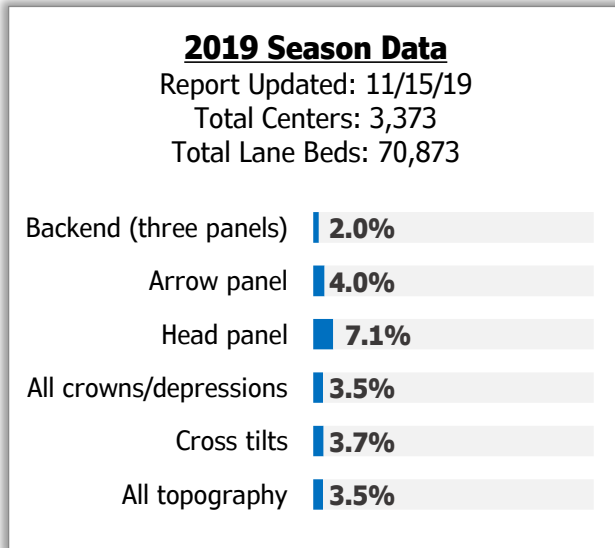
Crown and depression measurements are taken on the 10 board from both edges of the lane (L10 board and R10 board) and the center board (20 board) for the first four synthetic panels or the first two wood lane locations. The fifth panel for synthetic lanes, or the last measurement for wood lanes, are measured on the 15th board from the left and right edges of the lane (L15 board

and R15 board).

The locations change down the lane, so measurements are taken in the ball-track area, which is where the ball travels to the strike pocket. Also, cross-tilts are taken at each of these locations.

### Overall Data

While data still is being finalized for 2019, we can report on the findings and comparison data received for the past two years, showing percentage of topography measurements found to be out of specification.



### Pit Measurements

Center certification specifications cover both the flatness of the lane and the pit measurements. The pit measurements are important as they affect how the pins fly after the ball impacts the pins.

Current inspections measure the kickback-to-kickback plate, gutter depths, and the lengthwise and crosswise tilts.

### Overall Data

Again, while data still is being finalized for 2019, we can report on the findings and comparison data received for the past two years, showing percentage of pit measurements found to be out of specification.

### 2019 Season Data

Report Updated: 11/15/19

Total Centers: 3,373

Total Lane Beds: 70,873

Gutter depth 10-pin	7.8%
Gutter depth 7-pin	7.9%
Lengthwise tilt 6-10	1.4%
Lengthwise tilt 4-7	1.4%
Cross tilt	5.5%
Kick-back to kick-back	11.6%
All pit measurements	5.9%

### 2018 Season Data

Report Final

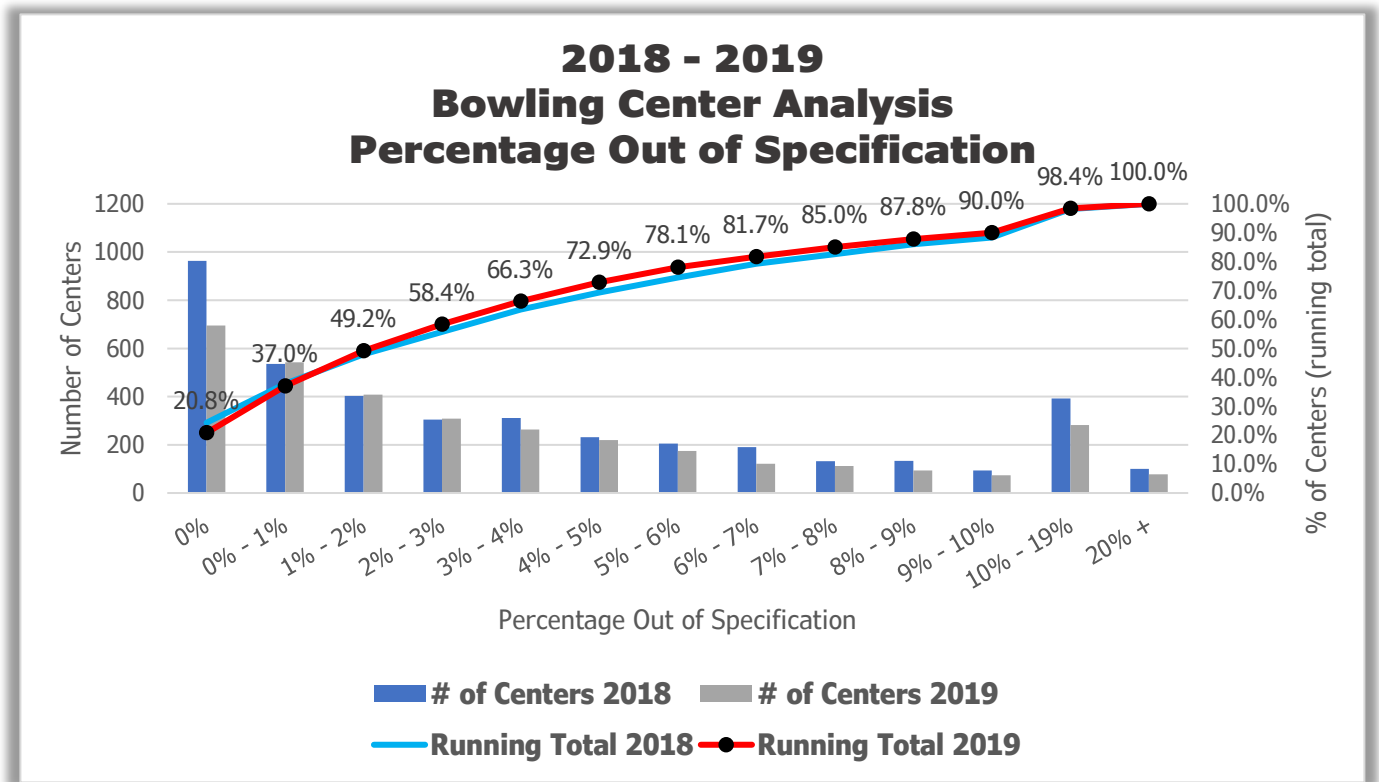
Total Centers: 3,994

Total Lane Beds: 85,750

Gutter depth 10-pin	6.9%
Gutter depth 7-pin	7.0%
Lengthwise tilt 6-10	1.1%
Lengthwise tilt 4-7	1.2%
Cross tilt	4.0%
Kick-back to kick-back	10.3%
All pit measurements	5.1%

## Facility Overview

The USBC Equipment Specifications and Certifications team also analyzed the results in numerous ways. Below are all certification results combined for the 2018 and 2019 inspection period when looking at the number of centers in each range for all measurements out of specification.



Please note, the 2019 data has only approximately 85% of the inspection reports collected thus far.



## Key Findings

After analyzing the topography data, USBC determined the following:

- 67.1% of local association data was submitted with no readings outside of +/- 0.050"
  - a. A portion of this data is accurate, but another portion could be due to false dial indicator readings
- 11.7% of local association data was submitted with no negative readings
- 5.2% of local association data fields were the same value across the report category

## Spot Checks

After analyzing the data, it was determined a deeper look into the figures was needed. USBC sent two-person teams to measure lanes in 76 centers to verify the certification reports.

Below are the results of the data from those 76 spot-check centers, alongside the results from the certification forms submitted from the local inspectors, and the variances found. The percentages in the first two columns show percentage of measurements out of specification.

Measurement Type	2018 Results	Spot Check Results	Variance
<b>All topography</b>	2.9%	6.8%	-3.9%
Cross tilts	3.7%	7.7%	-4.0%
All crown/depressions	2.6%	6.5%	-3.8%
Head panel	6.0%	17.8%	-11.8%
Arrow panel	3.1%	5.5%	-2.4%
Backend (three panels)	1.2%	2.8%	-1.5%
<b>All pit measurements</b>	4.5%	7.6%	-3.1%
Kick-back to kick-back	13.0%	11.3%	1.7%
Cross tilt	13.0%	11.1%	1.8%
Lengthwise tilt 4-7	0.7%	1.5%	-0.8%
Lengthwise tilt 6-10	1.3%	1.5%	-0.3%
Gutter depth 7-pin	4.5%	9.2%	-4.6%
Gutter depth 10-pin	2.7%	10.8%	-8.2%

As you can see by the data, the spot-check results yielded a variance in all categories, with the largest variances coming from the head panel measurements, gutter depths and lane cross-tilts; 11 out of the 13 categories found data further out of specification.

The next chart evaluates all the bowling centers measured by local inspectors for the past two years, and then shows a comparison of where the centers may fall out of specification if the spot-check data were to be spread across all certified centers.

When comparing data from 2018, 2019, and the spot checks thus far, it can be reasonably inferred the variances are much larger than expected.

% out of specification	# of Centers 2018	% of Centers 2018	Running Total 2018	# of Centers 2019	% of Centers 2019	Running Total 2019	# of Centers Spot Check	% of Centers Spot Check	Running Total Spot Check	Spot Check Variance to 2018
0%	963	24.3%	24.3%	695	20.8%	20.8%	1	1.3%	1.3%	-23.0%
0 - 1%	536	13.5%	37.8%	542	16.2%	37.0%	3	3.9%	5.3%	-32.5%
1 - 2%	403	10.2%	48.0%	408	12.2%	49.2%	11	14.5%	19.7%	-28.3%
2 - 3%	304	7.7%	55.7%	308	9.2%	58.4%	6	7.9%	27.6%	-28.1%
3 - 4%	311	7.8%	63.5%	264	7.9%	66.3%	8	10.5%	38.2%	-25.3%
4 - 5%	231	5.8%	69.3%	220	6.6%	72.9%	5	6.6%	44.7%	-24.6%
5 - 6%	205	5.2%	74.5%	175	5.2%	78.1%	8	10.5%	55.3%	-19.2%
6 - 7%	190	4.8%	79.3%	122	3.6%	81.7%	10	13.2%	68.4%	-10.9%
7 - 8%	132	3.3%	82.6%	112	3.3%	85.0%	6	7.9%	76.3%	-6.3%
8 - 9%	134	3.4%	86.0%	93	2.8%	87.8%	4	5.3%	81.6%	-4.4%
9 - 10%	93	2.3%	88.3%	74	2.2%	90.0%	3	3.9%	85.5%	-2.8%
10 - 20%	392	9.9%	98.2%	282	8.4%	98.4%	7	9.2%	94.7%	-3.5%
20+%	100	1.8%	100.0%	78	1.6%	100.0%	4	5.3%	100.0%	0.0%
	<b>3994</b>			<b>3373</b>			<b>76</b>			

The chart above is showing the variance from the running total spot checks to the running totals for 2018. This data concluded there are far more centers out of specification than identified by local inspections.

## **TIERED CERTIFICATION**

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In October of 2018, the Equipment Specifications and Certifications Committee asked USBC to further investigate a tiered certification program. USBC then hired a third-party consultant with a background in process engineering to assist.

One of the first objectives was to solicit the help of several industry professionals, from USBC and BPAA board members to local associations and bowling centers from around the country, to help evaluate a tiered center certification program.

### **Ideation Group**

On February 13-14, the Tiered Certification Ideation Group met in Arlington, Texas. The group consisted of the following:

- USBC Board members (2)
- Local Association Manager (1)
- Local Inspectors (2)
- BPAA Board members/proprietors (4)
- Technical consultants (2)

The group received a history overview of center certification dating to the beginning of the American Bowling Congress (ABC), along with the most recent data collection report on lane inspections from the 2018-2019 season.

After the presentation, the group went through a brainstorming exercise, answering approximately 20 questions surrounding center certification. Each person answered the questions independently, and then a discussion occurred surrounding each of the questions.

A summary of the discussion points, in no particular order:

- The accuracy of the inspection data was questioned
- Training and inspection tool calibration is an issue
- Inconsistency from one inspection to another
- Certification data should dictate tier levels
- Centers will respond to tiered certification differently
- Tiering should allow a re-inspection after repairs to improve tier level
- Only certified inspectors who take a test and pass should do inspections
- Need to determine why the data may be inaccurate; spot-checking will help

On the second day, the group split into two groups to answer several key questions and then present their opinion on what tiered certification would look like:

QUESTIONS	GROUP 1	GROUP 2
Is a tiered system viable?	Yes	Yes
If yes, how should we communicate it?	Public sticker with tier listed	Define tiers, education, sticker at center and BOWL.com listing
How would you set the tiers?	Level 1-4	Gold-Silver-Bronze-Other
How often will inspections take place?	Skip years for top tiers and annually for all others	Skip years for top tiers and annually for all others
Who is conducting the inspections?	Certified Inspectors	Certified Inspectors

After the ideation group meeting, the belief was that USBC needed more data from those who will be directly impacted by any decision. Due to some of the concerns around local inspections, the tools, and education and training were further evaluated. Also, the idea of state, regional or national inspectors was considered, too.

## Proprietor Group

On April 3-4, 2019, the Proprietor Working Group met in Arlington, Texas. The group represented the following:

- Two eight-lane centers
- One 60-lane center
- Nine single-center proprietors
- Two proprietors had two locations
- One proprietor had three locations
- General manager of 10 locations
- Stakeholders were from 11 different states spread around the country

This group also received a history overview of center certification dating to the beginning of ABC, along with the most recent data collection report on lane inspections from the 2018-2019 season.

After the presentation, the group went through the same brainstorming exercise as the ideation group, where they answered approximately 20 questions surrounding center certification. Some slight additions to the questions were made to help qualify some ideas that came from the previous ideation group. Each person answered the questions independently, and then a discussion occurred surrounding each of the questions.

A summary of the discussion points, in no particular order:

- The 2018 data was judged to be reasonably accurate
- Spot checks are important
- Only accurate certification data should determine tiering
  - a. Training of inspectors has been an ongoing issue
  - b. Discussion - national inspectors
- The group was split on adjusting the interval of inspections
- Repair then re-inspection a must
- Felt tier levels should be published

- Most felt the tiering would not negatively affect business
- All lanes pass the same specifications is important
- Felt if the cost of inspections went up, there should be additional value
- Agreed most repairs can be performed by an in-house mechanic

On the second day, they were split into three groups to answer several key questions and then present what tiered certification looked like.

QUESTIONS	GROUP 1	GROUP 2	GROUP 3
What direction should USBC take?	Tiered	Tiered	Tiered
How would you set the tiers?	Three tiers	Three tiers	Four tiers
Should we publish the results?	Sticker at the center, BOWL.com, education	Print and digital recognition, explain levels on BOWL.com	BOWL.com with tiers, use digital logo, digital advertising tools
Who is conducting the inspections?	Training and certified inspectors, online test	Trained local volunteers, or professionals	State level trained certified inspectors, or professionals

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*At the April 2019 Equipment Specifications Committee meeting, the team presented what they had learned and developed for consideration. At this time, the committee asked USBC to conduct additional research into a tiered center certification program with national inspectors.*

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## Comparison Studies

During the next research phase, USBC evaluated several other national governing bodies to determine if other sports took a similar approach to tiered certification of their playing fields. Those researched were track and field<sup>4</sup>, tennis<sup>5</sup>, and golf<sup>6</sup>.

<sup>4</sup> [Track and Field](#)

<sup>5</sup> [Tennis](#)

<sup>6</sup> [Golf](#)

CATEGORIES	IAAF (Track and Field)	ITF (Tennis)	USGA (Golf)
Frequency of inspections	Once in four years	Once in three years	Once in 10 years
Tiered certification Yes/No	Yes	Yes	Yes
Tiering measurement type	Distance and material	Court speed	Course slope rating
Tiering structure	Class 1, Class 2, Indoor, Certified	Slow, Medium-Slow, Medium, Medium-Fast, Fast	Courses compared against a standard scale

## Program Details

Considering the feedback from both groups, an analysis of the certification data and how other national governing bodies approach tiering, USBC then began formulating what tiered center certification meant for the future of this program.

### Eligibility

It was determined tiered certification would be an inclusive program where all bowling centers will be certified and be able to host leagues and tournaments. Centers can choose whether to make the necessary improvements to their lanes and will be measured to determine which tier they fall within.

***Excluding members and decertifying leagues was not the best approach in moving forward productively.***

### National Inspectors

A small team of national inspectors will be hired by USBC to inspect bowling centers around the country. They will be fully trained professionals who will coordinate with centers to efficiently conduct lane inspections throughout the country.

### Inspection Tools

USBC is examining the tools to streamline the inspection process. Additional testing of the tools will continue.

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*At the November 2019 Equipment Specifications Committee meeting, the team presented lane certification data, spot-check data, and the wire frame for tiered certification. It was approved to move forward with a tiered center certification program, including national inspectors, and no longer require the current annual lane inspections that have been performed by local association inspection teams.*

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## Additional Announcements

There will be no inspections for the next two years as the grace period has been extended for bowling centers.

Lane inspections obviously will be a hot topic of conversation. Over the next year and half, USBC will continue to work with industry stakeholders, as we have in the other areas of this program, to determine the pricing levels and other program details.

A business plan also is being created for delivery; however, no decisions have been made at this time.

## Timeline

A final plan for tiered center certification is to be fully announced at the 2021 USBC Convention. This will allow adequate time for the Equipment Specifications and Certifications team and committee to ensure the details of this program are sound and all stakeholders are properly engaged.



The tier levels will be developed from the data collected starting in Year 1 (2022) of the national inspections to ensure the levels are an accurate reflection of what centers look like across the country. The timing of that announcement will be made after the appropriate amount of data is collected.

## FINAL SUMMARY

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The previous lane certification studies, along with the current inspection data gathered over the past two years, are a commitment to the idea that USBC needs to continually explore all facets in bowling while thinking about the future of the sport and the integrity of the competitions conducted in the sport.

In addition to the research and data gathered from today's bowling centers, USBC believes the engagement of all stakeholders in these topics is extremely important to build a brighter future for the sport and a better USBC of which everyone can be proud.

Data shows very few centers met 100% of the current specifications during spot checks and very few had a significant portion of the center needing corrections. The data supports creating a tiered certification that can be inclusive and flexible for centers while giving members more information about center measurements.

## Local Association Impact

While lane inspections are no longer required for the local inspectors and associations who have been checking them for so many years, the important work continues. Some associations may be asking themselves what their role is moving forward.

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*Rest assured, essential local services to support your individual bowling community is paramount to A Future for the Sport.*

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In addition, those board members, volunteers and members of the local inspection teams can now shift more attention toward all the additional education and resources being provided to help local associations better service their communities.

- Member and league services; league meetings, processing averages timely and efficiently
- Execution and promotion of association-operated tournaments
- Marketing and promotion throughout your community
- Youth development programs
- Local award and recognition programs
- Leadership development through education and succession planning
- Effectiveness and engagement of committees and board of directors
- Recruiting and retaining volunteers
- Fundraising strategies and effort
- Budgeting and financials for the future

## **Next Steps**

**The United States Bowling Congress no longer will require annual local inspections. A tiered center certification program along with national inspectors is being finalized.**

Data will continue to be collected through the remainder of the 2019-2020 season. USBC will publish a final analysis and report.

Further education and awareness with both associations and centers at the local level will be important, as well as an ongoing dialogue with all stakeholders concerning what the future of the sport should look like. USBC then will proceed responsibly toward it.

This will allow USBC to continue to further the development of the program, including starting to better understand the effects of scoring within the field of play.

USBC will continue to research all areas of the sport moving forward. USBC has been, and always will be, committed to fulfilling its role as the National Governing Body for the sport of bowling.