

## Proposed Changes to the Space Needs Determination Formula

### Conceptual Draft for Discussion Purposes Only

#### Charge for the Joint Project:

##### **Chair Kuntz's Challenge from the January 21, 2016 State of the System Address:**

"We're also carefully measuring the return on investment from our capital projects and we need to maintain that focus to demonstrate to our stakeholders the true value of investing in the State University System. We should also be measuring the impact of increasing our online programs because online education, taken to scale across the SUS, affords an alternative means to address future capacity requirements. Where feasible, we need to work together to expand online course offerings to reduce the need for new brick and mortar facilities. So I would like to see the Facilities Committee create an interface with the Innovation and Online Committee to ensure that we look at the system holistically as we consider new capital projects."

These 3 directives from the Chair have each been carefully studied, and staff have carefully considered the input and feedback from the universities associated with the all-day meeting of the two committees held on May 12 at FGCU. Significant follow-up was done on all questions, and adjustments to various elements affecting online programs and space needs, including FTE, inventory and factors were modeled.

The result of this modeling is the Dynamic Capital Planning (DCP) model, which was developed to address each of these elements. The DCP provides a viable model to replace the static relative space needs determination model. The DCP is a flexible model, developed at no cost by staff.

The DCP is designed to be an adaptable planning tool; allowing for space planning policy assumptions to be revisited, tested and compared on a regular basis. This is in contrast to the existing "Space Needs Formula"; while this has served the SUS well over the decades, the embedded modeling assumptions place inherent limitations on its flexibility and usefulness to the SUS.

#### **Net Impact of the Dynamic Capital Planning (DCP) model**

The SUS Space standards are expressed in terms an ideal maximum Net Square Feet per FTE. Upper limits are then set for each of 9 educational space types, using established national definitions. The 5 year FTE work plan projections can be applied to set the benchmark as to how closely the existing space inventory is under (or over) these established space standards. This benchmarking is essentially the survey process, which is designed to ensure that current and planned inventory of space is adequate to serve both today's students (245,531 FTE in 2015-2016) and planned growth (273,022 FTE in 2021-22).

For discussion purposes, the dollar cost impact of the DCP is described at a conceptual level, based on a revised set of base assumptions. . The use of different data, or base assumptions will of course result in different space need projections. For educational plant survey purposes, each university, working with Board staff, will agree upon the use of 1) a validated and agreed upon base inventory; 2) validated FTE projections; 3) the established Survey time-frame. As each new survey is completed, an apples to apples comparison can then be made between the cost of the previous educational plant survey recommendations, and the increase or decrease in cost of the new educational plant survey.

**This cost differential can be provided to the Board as a point of information to be included with each new educational plant survey submitted for approval by the Board of Governors.**

With that caveat, conceptual application of the DCP results in a net reduction in the 2021-22 year projection of space need of 4.4 Million Net Square Feet or 39%.

June 2015 Inventory of Educational Space	18,800,000	NSF
Old Formula Space Planning Deficit	(11,400,000)	NSF
New DCP Model Space Deficit	(7,400,000)	NSF

*(NSF= Net Square Feet; Main Campus Only; Based on 2016 Workplan Five Year Forecast)*

At the system current average project cost of \$345 per GSE, and a net to gross conversion of 1.2X, this is a reduction more than \$1,800,000,000 in projected space needs through 2021-22. The DCP is not an across the board reduction; the DCP now allows for the direct comparison of need vs. inventory by the Board of one school vs. another.

Conceptually, the most significant change in using the DCP is not due to adjustments for online education. Rather, the DCP model shifts the space need measurement focus. The result is a shift from weighted needs, with each university being assigned a unique “factor” weight, to unweighted space need, which views all schools main campus needs as equivalent, with some few exceptions:

SPACE FORMULA FACTOR COMPARISON BY NSF												
	UF	FSU	FAMU	USF	FAU	UWF	UCF	FIU	UNF	FGCU	NCF	FPU
Current Factor Total:	178	131	127	132	117	115	104	107	104	126	130	NA
Proposed Factor Total:	113	113	113	113	113	113	113	113	113	113	113	113

The assignment of weighted space needs was consistent with the original Board of Regents model, where all critical inputs (student enrollment, funding, program enrollment, and new program creation). Under this model, the determination of facilities needs was simply one more controlled variable. However, the current model is not focused on controlling system inputs; but is now outcome focused. Thus, an unweighted factor is more appropriate. This chart illustrates the DCP change by university, with the only difference in factors being a recognition

that due to both size and unique scope, NCF and FPU will require a space model allocation greater than the standard base factor, to be determined.

A key difference between the DCP and the existing space model is the treatment of research space. Under the old model, research need was determined by a combination of student FTE and a static program mix. The new DCP model recommendation is to set a minimum research “Bench” level that will continue to be based on student FTE. **The DCP excludes research space needed to go beyond the basic “Bench” level of research – rather, this should be established based on metrics directly related to research.**

The Board looks at 4 metrics that are directly related to research: 1) Total Annual Research Expenditures; 2) Total Annual Research Expenditures, Science and Engineering only; 3) National Ranking in Research Expenditures; and 4) Total Annual Research Expenditures in Diversified Non-Medical

Sciences (Science and Engineering Only)

		Total Annual Research, Science and Engineering Only	Total Annual Research, in Diversified Non-Medical Sciences, Science and Engineering Only	National Rankings in Research Expenditures (# of STEM Program in the Top 100)	Total Annual Research Expenditures 2018-19 Workplan Goals (Not a Preeminent Metric)
Meets Preeminent Criteria cutoff in Yellow	UF	\$ 700	\$ 518	8	\$ 793
	USF	\$ 420	\$ 229	7	\$ 541
	FSU	\$ 237	\$ 228	7	\$ 221
	UCF	\$ 170	\$ 168	7	\$ 250
	FIU	\$ 125	\$ 114	3	\$ 200
	FAMU	\$ 32	\$ 22	0	\$ 55
	FAU	\$ 20	\$ 15	0	\$ 34
		\$ 1,704	\$ 1,294		\$ 2,094

The pro of using either of the first two metrics is the focus on actual proven results in a narrow area of research; Cons are that a significant amount of total research is excluded, and there is no future focus.

The pros of using the third metric is it would set a clearly defined area of focus for additional research dollars. The con is that only the 4 schools in the Preeminent rankings would compete for these dollars.

The pros of the last metric is that it is future looking, and would allow all 7 of the SUS research universities to apply for space funding. Also, schools wishing to use this metric could consider adding it to their future Work Plans. The con is that these future goals may need further refinement.

Staff believes that further study and university collaboration is needed to develop this concept of establishing a competitive research facility grant program.

### **Future Plans**

Board staff will work with all universities on testing of the DCP assumptions.

Board staff will pilot the new factors for upcoming educational plant surveys at USF, FPU, and UWF; with the final survey for each university including comparative information when provided to the Board of Governors for final approval over.

Board staff will work with NCF on a custom 5 year facilities plan.

Board staff will work with any university requiring modification to its approved EPS.

With regards to the current space inventory definitions and classifications. The rapid evolution of academic technology, changing pedagogies and the proliferation of mixed and multi-use space is presenting significant classification challenges. We are confronted with space that at various times throughout the day may function as a classroom; teaching lab and or study/meeting space, and beyond. Staff requests additional time to further explore this topic.