6.　別添資料

平成 30 年度産学官連携支援事業委託事業

イノベーション経営人材育成システム構築事業

「平成３０年度大学トップマネジメント研修」

事業報告

成果報告書

6.1　平成 30 年度大学トップマネジメント研修募集要項

文部科学省「イノベーション経営人材育成システム構築事業」
平成３０年度　大学トップマネジメント研修
募集要項

政策研究大学院大学
科学技術イノベーション政策研究センター

1.　趣旨

本研修は、我が国の大学が有する知的資産の活用によるイノベーション創出に向けて、多様な学問領域から構成される複雑な大学組織全体をマネジメントすることのできる経営人材を育成するものです。

2.　育成される人材のイメージ

諸外国の先進的な大学マネジメントの在り方や我が国の大学組織の特性に深い見識を有し、学内外の多様なステークホルダーを巻き込みつつ、大学の経営戦略・財務戦略の策定、産学連携のマネジメント、知的財産の適切な管理等を効果的に実施し、大学の経営力を強化することのできる現役または次世代の大学幹部

3.　研修内容

本研修は、「A. 国内プログラム」と「B. 海外プログラム」より構成されています。

研修参加者は、これらのプログラムを通じて、大学経営人材として必要な知識や知見を身につけるとともに、自身の経験と問題意識に基づいた大学の経営・マネジメント上の課題について発表・討議を行い、大学の経営力強化に結びつく具体的方策を検討することが求められます。

A. 国内プログラム（年 4 回、各 3 日間程度）

国内の学長経験者、産業界関係者及び有識者による講義、海外から招へいするユニバーシティ・リーダーズとのワークショップ等を通じて、大学の戦略的なマネジメントを遂行する際に必要な基礎的な知識（大学の経営戦略論、財務会計論、産学連携マネジメント論、知的財産権論、教育研究評価論等）を提供するとともに、参加者の問題意識や経験を共有するための機会を提供します。

※平成２９・２８年度国内プログラム講師陣については、＜参考１＞をご参照ください。

B. 海外プログラム（長期・短期）※研修内容・研修時期は変更の可能性があります。

＜長期プログラム＞

a. カリフォルニア大学　サンディエゴ校研修（約 1 週間）

公的資金の削減という環境下で先進的な大学経営を行っているカリフォルニア大学サンディエゴ校（UCSD）において、「公的資金が減少する中、如何に大学は教育研究活動を展開し、イノベーションを促進していくのか」をテーマに、UCSD の実際の取組みを担当者

から学びます。米国トップの研究大学の現場で大学マネジメントを学び、現地の大学関係者とネットワークを構築する機会を提供します。（研修で扱うテーマ例：UCSD の戦略計画・財務戦略、産学連携と技術移転、寄付募集戦略等）。

b. シンガポール国立大学研修（4 日間程度）

急速な経済成長を背景に、アジアをリードするグローバルな大学としての地位を確立したシンガポール国立大学において、大学独自のマネジメント戦略を学び、現地の大学関係者とネットワークを構築する機会を提供します。

＜短期プログラム＞

研修参加者の一部を対象として、アメリカ等海外の研究大学における実際の大学経営改革の現場を視察し、かつ経験するインターンシップ型のプログラムを実施する予定です。（２～３日程度、年数回予定、詳細は調整中）

※平成２９・２８年度短期プログラム派遣先ついては、＜参考１＞をご参照ください。

4. 研修日程（予定）※日程は変更の可能性があります。

プログラム	実施時期	実施場所
第１回国内プログラム	政策研究大学院大学	平成 30 年 6 月 29 日（金）～7 月 1 日（日）
海外長期プログラム	カリフォルニア大学サンディエゴ校	平成 30 年 8 月 26 日（日）～9 月 1 日（土）
第２回国内プログラム	政策研究大学院大学	平成 30 年 9 月
第３回国内プログラム	政策研究大学院大学	平成 30 年 12 月
海外長期プログラム	シンガポール国立大学	平成 31 年 1 月（4 日間程度）
第 4 回国内プログラム並びに事業総括シンポジウム	政策研究大学院大学	平成 31 年 2 月

※上記以外に海外短期プログラムを一部参加者対象に実施予定。

5. 募集人数・研修期間

25 名程度、1 年間（参加決定通知後～平成 31 年 3 月 31 日）

※審査基準に満たない場合、募集人数に達しない場合がございます。

※海外プログラムについては、受入相手先の事情により、国内プログラム参加者の中から参加者を選定する可能性があります。

6. 応募条件

- 国立大学に所属する者
- 所属大学の学長の推薦を受けた者とし、組織としての応募であること
- 参加者本人が国立大学の経営の中核を担う人材としてのキャリアを強く意識していること
- 所属大学も被推薦者が将来大学の要職に就くことを期待し、本プログラムに参加することを

組織として最大限支援（学内委員会等用務の免除・軽減、教育研究業務履行のための人的支援、研修修了後の人事計画等）すること

・ 研修修了後も、参加者本人が参加者のネットワーク構築のための報告会等に参加し、組織としてもこれを支援すること

7. 費用負担

原則、プログラム参加者の国内外の移動・滞在等に必要な旅費・宿泊費等の経費は、プログラム参加者の所属大学が負担する。

8. 提出書類、提出方法

【提出書類】

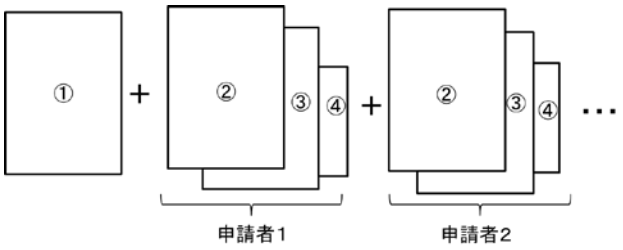
①参加申請書【様式１】
②申請者情報及び教育研究業績書【様式２】
③志望理由書【様式３】
④所属大学の学長による推薦状【様式４】

【提出方法】

提出期限までに、紙媒体及び電子媒体を提出すること。

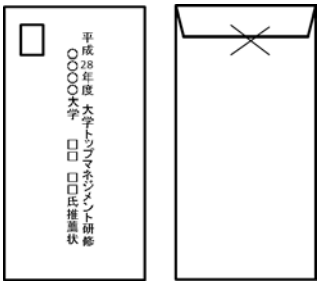
＜紙媒体（郵送にて提出）＞
提出にあたっての注意事項：

１）一大学から複数名申請する場合は、提出書類②～④は申請者毎に作成ください。
提出の際は、①を一番上にして、①の名簿順に②～④をまとめてご提出ください（下図参照）。



２）提出書類④は、申請者の所属大学長が記入・捺印の上、封筒に入れ封をして提出ください。
その際、封筒の表に、次の通り記載ください（右図参照）。

「平成 30 年度大学トップマネジメント研修
○○大学（大学名）　□□　□□氏（申請者名）推薦状」



＜電子媒体（E-mail にて提出）＞

提出にあたっての注意事項：

1）提出書類①～③は、提出先宛に電子媒体でも送付してください（PDF あるいは Word での提出をお願いします。押印は、無くても構いません。）。

2）送信メールの題名は、年度、研修名及び機関名称としてください。
（例）平成 30 年度　大学トップマネジメント研修（○○大学）

3）添付ファイル名は応募する応募機関名称と様式番号としてください。
（例）（○○大学）様式X

4）受領通知は、紙媒体を受取次第、①の連絡先に対してメールにて送ります。

【締め切り】<u>**提出書類①～③（電子媒体）　　平成 30 年 4 月 13 日（金）※必着**</u>
<u>**提出書類①～④（紙 媒 体）　　平成 30 年 4 月 16 日（月）※必着**</u>

【提 出 先】

（紙 媒 体）〒106-8677　東京都港区六本木 7-22-1
政策研究大学院大学　科学技術イノベーション政策研究センター（SciREX センター）
イノベーション経営人材育成システム構築事業
「大学トップマネジメント研修」事務局宛

（電子媒体）Email：ttm-ml@grips.ac.jp

9. 募集・選考日程等

募集期間：公募開始日～平成 30 年 4 月 13 日（金）
書類選考：平成 30 年 4 月中旬～5 月中旬予定
※必要に応じ 5 月 14 日の週に都内にて面談を実施する場合がございます。
結果通知：平成 30 年 5 月下旬予定　※選考結果に関する個別の照会にはお答えしません。

10. 審査基準

1) 申請者本人が大学のマネジメントに携わった経験があり、かつ、大学の経営・マネジメントについて、具体的な問題意識を有していること
2) 大学経営人材としての具体的なキャリアプランを有していること
3) 研修修了後に、学内での研修やセミナー等で成果を発表するなど、本研修で得た成果を活用する具体的な計画を有していること
4) 大学として、研修参加者に対し、研修修了後の大学経営人材としての具体的なキャリアイメージを有していること

11. その他

- 研修期間は 1 年間です。
- 国内プログラム・海外プログラム終了後、アンケート及び報告などをお願いする場合があります。

- 悪天候、渡航先の政治、治安等のやむを得ない事情により、プログラムの日程・内容が変更になる場合があります。
- 外国人講師による研修は英語での講義とディスカッションになります。公開セミナー等の一部を除き、通訳は手配しませんので、あらかじめご了承ください。

12. お問い合わせ先

〒106-8677　東京都港区六本木 7-22-1
政策研究大学院大学
科学技術イノベーション政策研究センター（SciREX センター）
イノベーション経営人材育成システム構築事業
「大学トップマネジメント研修」事務局
TEL：03-6439-6376　　Fax: 03-6439-6260
Email: ttm-ml@grips.ac.jp

6.2　大学トップマネジメント研修の手引き

大学トップマネジメント研修
平成３０年度

年間研修スケジュール

第１回国内プログラム 大学改革シンポジウム「研究大学の再々定義」	6 月 29 日（金）～ 7 月 1 日（日）
海外長期プログラム カリフォルニア大学サンディエゴ校	8 月 26 日（日）～ 9 月 1 日（土）
海外短期プログラム カリフォルニア大学バークレー校 ・ スタンフォード大学	9 月 18 日（火）～ 9 月 21 日（金）
海外短期プログラム シカゴ大学・豊田工業大学シカゴ校	10 月 29 日（月）～ 10 月 30 日（火）
海外短期プログラム ウォータールー大学（カナダ）	11 月 13 日（火）～ 11 月 14 日（水）
第２回国内プログラム 「研究大学の将来と課題」	12 月 6 日（木）～ 12 月 8 日（土）
海外長期プログラム シンガポール国立大学	平成 31 年 1 月 21 日（月） ～ 1 月 23 日（水）
第３回国内プログラム 「教育研究の卓越性の見える化」	平成 31 年 2 月 1 日（金） ～ 2 月 3 日（日）
第４回国内プログラム 総括シンポジウム「国立大学改革の最前線」	平成 31 年 3 月 1 日（金） ～ 3 月 2 日（土）

第１回　国内プログラム

【開 催 日】

平成３０年６月２９日（金）～７月１日（日）

【場　所】

政策研究大学院大学　想海樓ホール（1 階)、会議室１A・B

【研 修 内 容】

我が国の大学が有する知的資産の活用によるイノベーションの創出に向けて、日本の大学改革を推進する将来の経営人材を育成するため、戦略的なマネジメントを遂行する際に必要な基礎的な知識を提供すると共に、日本の大学マネジメントが直面する諸問題を認識し、取り組むべき課題について議論する。

第１回目は、「大学トップマネジメント研修」の目的を確認し、日本および諸外国の大学改革の動向やマネジメントのあり方について理解すると同時に、大学経営とは何であるか、そして日本における国立大学の役割や課題を通した大学マネジメントについて学ぶ。

【スケジュール及び講義概要】

■1 日目　　平成 30 月 6 月 29 日（金）

12:30-13:00　受付（想海樓ホール）

＜大学改革シンポジウム（公開セミナー）＞『研究大学の再々定義』

【要　旨】

平成３０年３月、世界最高水準の教育研究活動の展開が相当程度見込まれる大学が指定国立大学として選定された。政府、産業界からの大学の教育研究、マネジメントの質的高度化への期待は高まる一方である。日本の研究力を支える中心的な主体であった国立大学は、現在どのような位置にあり、今後どのような方向に進んで行くのであろうか。

このシンポジウムでは、我が国においてこれまで大学改革に深い関心と造詣とその政策に関わってきた、国立大学、政策担当者、産業界のリーダーをお招きし、それぞれの立場から、近年の大学改革の動向を振り返りながら、日本の国立大学の今後の行方について議論する。

＜シンポジウムの形式＞

第１部では、財務省、内閣府、文科省のそれぞれから、EBPM と大学改革、「統合イノベーション戦略」に掲げる大学改革、2004 年の国立大学法人化以降の大学改革の軌跡を振り返り今後の政策を論じる。

第２部では、上山議員がファシリテーターとしてパネルディスカッションを行い、今後の大学改革の行方について率直な意見交換を行い、最後に意見の集約を議長サマリーの形で報告する。

＜取り上げる論点＞

- ＣＳＴＩの「統合イノベーション戦略」における一連の大学改革
- 大学改革支援産学官フォーラムの設立
- 大学トップマネジメント研修の後継事業
- 各大学の取り組みと将来構想
- 国立大学法人の今後についての設計
- 高等教育のグランドデザイン

13:00-14:45　主催者挨拶
（第１部）　　文部科学省大臣官房 新妻 秀規 政務官
来賓ご挨拶　『イノベーションと大学改革』
　衆議院議員 自由民主党知的財産戦略調査会 会長 甘利 明 氏
『大学改革のＥＢＰＭ－神話を超えて－』
　財務省主計局 次長　神田 眞人 氏
『ＣＳＴＩの統合イノベーション戦略について』
　内閣府（科学技術・イノベーション担当）審議官 赤石 浩一 氏
『イノベーション創発を見すえた大学改革　～振り返りと今後の方向性～』
　文部科学省高等教育 局長 義本 博司 氏
14:45-15:00　休　憩
15:00-17:30　パネルディスカッション
（第２部）　登壇者：
　上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）
　神田 眞人 氏（財務省主計局 次長）
　五神　真　氏（国立大学法人東京大学 総長）
　小林 喜光 氏（公益社団法人経済同友会 代表幹事）
　中西 宏明 氏（一般社団法人日本経済団体連合会 会長）
　橋本 和仁 氏（国立研究開発法人物質・材料研究機構 理事長）
　山極 寿一 氏（国立大学法人京都大学 総長）　　<50 音順>

■２日目　　平成 30 月 6 月 30 日（土）

09:00- 09:30　受　付（会議室１A・B）
09:30-11:30　講義『大学改革のゆくえ』
講師：安西 祐一郎 氏
　　（独立行政法人日本学術振興会 顧問・学術情報分析センター 所長）
11:30-13:00　昼　食
13:00-15:00　講義『国立大学の経営：私の視点』
講師：濵口 道成 氏（国立研究開発法人科学技術振興機構 理事長）

【概　要】
近年、毎年のように日本人がノーベル賞を受賞する時代を迎えている。しかし、その足下で、世界各国の科学技術比較に目を転ずると、日本の科学技術の競争力は急速に低下しつつある。私共、科学技術振興機構（JST）は、早くからこの危機的状況を指摘し、その課題と対策について分析を進めてきた。ノーベル賞受賞の原動力となった 20～30 年前の日本の科学は活力に満ちていたが、我々がノーベル賞の余韻に酔いしれているうちに、世界の科学技術力地図は大きく変化し、日本のみが取り残されている。この変化を誘導している潮流は、AI、IoT に駆動されるが第 4 次産業革命の到来と人類社会の持続可能性を問う課題 SDGs の増大にある。1999 年のブダペスト宣言で明示されたように、時代の流れは、科学が「知識の為の科学」に留まることを許さず、「社会の為の科学」の役割を果たす事を強く求めている。しかし残念ながら、日本のアカデミアはこの激流に掉さしきれずにいる。またその先には、国立大学の更なる改革が、必然的展開として顕在化してくるであろう。
なぜだろうか。明らかな理由の一つに、科学技術予算がある。この 10 数年余り日本の科学技術関連予算は伸び悩み、科学の主体を担う国立大学の運営費交付金は減り続けてきた。他方、中国、韓国の科学技術予算は各々10 倍、5 倍となり、欧米先進国のそれも 1.5 倍となっている。天才の閃きを除けば、科学は正直な活動である。科学の進展は、投資資金に依存する側面を持つ。しかし、少子高齢社会に起因する社会保障費の増大に悩む日本にとって、残念ながら科学への投資には限りがあるのが現実だ。
さて、この袋小路とも言える難局を超える道はあるのだろうか。ヒントは独、仏、英国にある、と私は思う。日本と独、仏、英国を比較したとき、これらの国の科学者数は各々日本の半分程度であり、一人当たりの研究費も日本とほぼ同額である。しかしこれらの国の論文の被引用件数比較から見た競争力は低下していない。この事実は、日本の科学技術のマネージメントに課題がある事を強く示しており、工夫次第で新しい展開はあると言える。
では、何が課題か。私は、主に二つあると思う。第一は、国際共同研究にある。結論的に言えば、優秀な若手研究者の国際化を強力に進める事が最も効果的だ。もう一つの課題は、人材育成も含めた戦略的・組織的な産学連携の推進にある。本講義では、以上の情報を含む種々のデータを比較しつつ、国立大学の将来について議論を深めたい。

15:00-15:10　休　憩

15:10-15:30　大学トップマネジメント研修 オリエンテーション

15:30-17:30　『アイスブレイク：研修生同士の問題意識の共有』
進行：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）
【概　要】
国立大学改革や大学経営などについて、研修参加者の問題意識を共有する。それら諸問題の解決に向け必要な知識、意識改革の重要性などについて議論し、更には本研修の意義を理解する。

18:00-　懇親会

■3日目　平成30月7月1日（日）

9:00- 9:30　受　付（会議室１A・B）

9:30-11:30　講義『国立大学の経営課題』
講師：金子 元久 氏
（国立大学法人筑波大学大学研究センター 特命教授）

【概　要】
国立大学は法人化以降、様々な変化を遂げてきた。しかもその変化は、おもに政府や社会からの圧力によって大学が改革を余儀なくされる、という形で、しかも休みなく続いて来た点に特徴がある。結果として大学は短期的な問題の処理に振り回される一方で、確とした中・長期的な展望を持ち得ず、それが大学の活力を失わせる、という隘路に陥っている。また国立大学は様々な意味で分化しており、国利大学の中で共有する問題を率直に話し合う、という機会も多いわけではない。こうした中で、国立大学の経営人が、国立大学をめぐる状況と、国立大学内部にある問題をどのように理解し、改革の中期的な方向をどのように打ち立てるか、といった点について問題を提起したい。

11:30-12:30　昼　食

12:30-14:30　講義『大学マネジメント論』
講師：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

14:30-14:40　休　憩

14:40-15:40　海外研修の概要説明
『UC サンディエゴ校（長期）、UC バークレー校・スタンフォード大学（短期）の事前研修について』
進行：牧 兼充 氏（早稲田大学経営管理研究科 准教授）

第1回国内プログラム　講演者・講師紹介

■　安西 祐一郎 氏（独立行政法人日本学術振興会 顧問・学術情報分析センター 所長）

1974 年慶應義塾大学大学院博士課程修了。カーネギーメロン大学客員助教授、北海道大学文学部助教授、慶應義塾大学理工学部教授、93 年～2001 年同理工学部長、01～09 年慶應義塾長、11～18 年独立行政法人日本学術振興会理事長。現在、独立行政法人日本学術振興会顧問・学術情報分析センター所長、内閣府人工知能技術戦略会議議長、内閣府戦略的イノベーション創造プログラム「ビッグデータ・AI を活用したサイバー空間基盤技術」プログラムディレクター、日本ユネスコ国内委員会会長等。文部科学省顧問、中央教育審議会会長、環太平洋大学協会会長、情報処理学会会長、日本認知科学会会長、日本学術会議会員等を歴任。文部科学省高大接続改革チームリーダー等として入試改革を含む高大接続改革を主導している。専攻は認知科学、情報科学。

■　濵口 道成 氏（国立研究開発法人科学技術振興機構 理事長）

1951 年三重県伊勢市生まれ。1980 年名古屋大学大学院医科学研究科博士課程修了、医学博士。専門は、腫瘍生物学、腫瘍生化学、細胞生物学。1980 年名古屋大学医学部付属癌研究施設助手。 1985 年から 1988 年米国ロックフェラー大学分子腫瘍学講座研究員。米国より帰国後から 2015 年まで、名古屋大学において、研究、教育、大学経営に従事する。2005 年就任の同大学医学部長を経て、2009 年名古屋大学第 13 代総長に就任。2015 年に同大学総長を退任し、 同年、国立研究開発法人科学技術振興機構理事長に就任 し現在に至る。2015 年より文部科学省科学技術・学術審議会会長もつとめ現在に至る。名古屋大学名誉教授。

■　金子 元久 氏（国立大学法人筑波大学大学研究センター 特命教授）

筑波大学特命教授、日本高等教育学会前会長、中央教育審議会専門委員、東京大学名誉教授、東京大学教育学部卒（1972 年）。同大学院修士課程修了・教育学修士（1974 年），シカゴ大学 Ph.D.(1985 年)。東京大学教授、東京大学大学院教育学研究科長・教育学部長等を歴任。専門は高等教育論、比較教育学、教育経済学。主著は『大学教育の再構築』玉川大学出版会 2013 年、『大学の教育力』筑摩書房 2007 年、P. Altbach & T. Umakoshi eds. Past and Future of Asian Higher Education、Johns Hopkins University Press, 2004（共著）、など。

■　上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

1987 年大阪大学経済学部経済学科博士課程修了。スタンフォード大学歴史学部大学院修了（Ph.D. ）。上智大学経済学部教授・学部長を経て、慶應大学総合政策学部教授、政策研究大学院大学副学長を経て、2016 年 4 月から現職。スタンフォード大学歴史学部・客員教授、東北大学工学部大学院工学研究科客員教授などを歴任。主な著書に『アカデミックキャピタリズムを超えて：アメリカの大学と科学研究の現在』（NTT 出版、読売・吉野作造賞）などがある。専門は、科学技術政策、科学技術史、公共政策、イノベーション政策、高等教育論。

第２回　国内プログラム

【開 催 日】

平成３０年１２月６日（木）～１２月８日（土）

【場　所】

政策研究大学院大学 想海樓ホール（1 階）、講義室 M

【研 修 内 容】

日本の国立大学では、国からの運営費交付金や授業料などで賄う経常研究経費が減少傾向にあり、公的研究資金を中心とする競争的資金への依存度が高まった結果、国立大学全体の研究力の低下や、研究分野による収入の格差が拡大している。一方で国際的には「ワールドクラス・ユニバーシティ」を構築する熾烈な争いがなされており、その基盤として、公的資金のみならず、産学連携による共同・受託研究や、寄附等、より多くの民間資金を獲得し、それを基にした研究マネジメントの改革が求められている。

第 2 回目は、大学財務マネジメント改革に取り組んだ経験のある講師を迎え、国立大学における財政・会計制度を理解し、研究資金の多様性に対応できる大学財務マネジメントに必要な取り組み及び大学経営について学ぶ。また、海外における評価と資金配分の関係から、日本の大学の教育研究の実績把握や資金制度の課題を考える。

【スケジュール及び講義概要】

■1 日目　　平成 30 月 12 月 6 日（木）

12:30-13:00　受付（想海樓ホール）

＜公開セミナー＞『研究大学の将来と課題』

【要　旨】

我が国の大学の研究力の強化は喫緊の課題である。大学における研究体制、研究環境の改善、優れた人事の確保、研究マネジメントの改革などの取り組みを通じて、グローバル社会における国際競争力を向上させることは大きな課題となっている。しかしながら近年、我が国の論文数や被引用の多い論文数の順位は低下傾向にある。この原因は、どこにあるのだろうか。

本公開セミナーでは、世界トップレベルの研究大学の一つである、エール大学で強いリーダーシップを発揮し 20 年間もの長期にわたり学長を務められた Richard Levin 氏をお招きし、在任中に Levin 氏の尽力により成し遂げられた、大学の国際化、高等教育の果たすべき役割の確立、産学連携の推進等の事例を通して、日本の大学、特に研究大学における研究活動やイノベーション促進の将来像について議論する。

13:00-13:10　主催者挨拶

文部科学省科学技術・学術政策局産業連携・地域支援課 西條 正明 課長

13:10-13:30　趣旨説明

上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

13:30-14:40　基調講演

『How to Build a World-Class University』

Richard C. Levin 氏（President Emeritus of Yale University）

14:40-14:50　休　憩

14:50-16:00　基調講演

『名古屋大学の将来ビジョン』

松尾 清一 氏（名古屋大学 総長）

16:00-16:10　休　憩

16:10-17:10　パネルディスカッション

登壇者：

Richard C. Levin 氏（President Emeritus of Yale University）

松尾 清一 氏（名古屋大学 総長）

上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

■２日目　　平成 30 月 12 月 7 日（金）

09:00-09:30　受 付 （講義室 M）

09:30-11:30　スペシャル・レクチャー（Workshop）

Richard C. Levin 氏（President Emeritus of Yale University）

11:30-12:30　昼　食

12:30-14:30　講義『知識基盤時代における大学経営・財務のあり方を考える』

講師：片山 英治 氏（野村證券株式会社公共公益法人課 主任研究員）

【概　要】

人口の少子高齢化の進展や知識基盤時代の到来、教育研究や優秀な学生・研究者の獲得を巡る競争の激化、グローバル化や地方創生への対応、中央・地方政府の厳しい財政状況等、わが国の国立大学法人を取り巻く環境変化は複雑化する一方である。こうした環境下で、国立大学の教育・研究基盤の一層の強化を図るべく財源の多様化と安定的財政基盤を構築する上で必要な研究大学の取り組みはどのようなものであろうか。

本講義では、高等教育機関に備わった特性を踏まえつつ、経営・財務やガバナンス、ステークホルダーズとの関係等多様な観点から日米比較等を行い、今後の国立大学法人経営・財務の検討に必要な課題を考えることを通して、研修ご参加各位の管理運営の参考に資することとしたい。

14:30-14:40　休　憩

14:40-16:40　講義『大学の財務会計論：国立大学法人の財政・会計とガバナンスについて』

講師：宮内 忍 氏（宮内公認会計士事務所 公認会計士）

【概　要】
独立行政法人の一類型としての国立大学法人の社会制度的ガバナンス構造の特質と、その結果生ずる財政構造の特徴を説明し、そのことを前提とする国立大学法人の財務会計制度を解説する。併せて、そのような財政構造を前提として存在する各種約束事（規制）の国立大学法人の自主性・自律性に与える財政的影響と近年続いている運営費交付金収益の減少傾向に対する対応策としての自主財源確保策、及び研究開発業務の重要性について説明したい。併せて、国立大学法人の財務会計制度における管理会計的要素の必要性とその具体的事例を提案し、この結果の大学マネジメントに与える影響とガバナンス機能の一部として必要な情報の共有化の必要性についても考えたい。

16:40-16:50　休　憩

16:50-17:50　海外プログラム：カリフォルニア大学バークレー校、スタンフォード大学研修報告会
進行：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

18:10-　懇親会

※UCB、スタンフォード研修報告会詳細タイムテーブル：別紙参照

■3 日目　平成 30 月 12 月 8 日（土）

09:30-10:00　受 付 （講義室 M）

10:00-12:00　講義『教育研究評価と財政的持続可能性』
講師：林 隆之 氏（政策研究大学院大学 教授）

【概　要】
日本では運営費交付金の削減と競争的資金へのシフトにより、国立大学の財政は厳しい状態にある。大学人からは交付金増額を求める意見が出されるが、財務省等から同意は得られない。本セッションでは、教育研究の実績把握とそれを踏まえた安定的財政制度について検討する。第一に、リーマンショック以降に欧州大学協会等で継続して行われてきた大学の財政的持続可能性の議論を紹介し、日本の運営費交付金制度や大学マネジメントで参考になる点を検討する。特に、欧州では交付金を配分方式が透明でシンプルであり、インセンティブになり、将来額が予測可能な形であることが望ましとされ、それを実現する実績配分方式が模索されている。そこでは大学評価や指標による教育研究の実績把握が重要となっている。このため、第二に、日本と海外での大学評価制度を確認し、大学の教育研究活動の実績としてどのような視点が必要になっているかを示す。第三に、運営費交付金と競争的資金の適切なバランスを確保するためのフルエコノミックコスト等の学内でのコスト把握について説明する。以上の説明を踏まえて、大学への資金の在り方や学内での教育・研究実績やコストの把握についてどのような方向がありうるかを議論したい。

12:00-13:30　昼　食

13:30-15:30　海外プログラム：カリフォルニア大学サンディエゴ校研修報告会
進行：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

15:30-15:40　海外プログラム：シンガポール国立大学 事前研修

第２回国内プログラム　講師・講演者紹介

■ Richard C. Levin 氏（President Emeritus of Yale University）

In 2013, Richard Levin completed a twenty-year term as President of Yale University, during which time he rebuilt the campus, redeveloped downtown New Haven, strengthened the University's international programs, and co-founded Yale-NUS College. He is the Frederick William Beinecke Professor of Economics, Emeritus, and a Senior Fellow of the Jackson Institute for Global Affairs. He is author of two volumes of essays on higher education (The Work of the University and the Worth of the University) published by Yale University Press. From 2014 to 2017, Levin served as Chief Executive Officer of Coursera, a provider of open online education from 150 top universities to 35 million registered learners worldwide. He continues as a Senior Adviser to his successor. Levin served on President Obama's Council of Advisors for Science and Technology. He is a director of American Express, C3 IoT, the William and Flora Hewlett Foundation and Yale-NUS College. He is a Fellow of the American Academy of Sciences and the American Philosophical Society. Levin earned a B.A. in History at Stanford University, a B.Litt. in Politics at Oxford University, and a Ph.D. in Economics at Yale. He holds Honorary Doctorates from Harvard, Princeton, Yale, Oxford, Peking, and Waseda Universities, and the Chinese University of Hong Kong.

■ 松尾 清一 氏（名古屋大学 総長）

1981 年 7 月同学大学院医学研究科博士課程修了。1981 年 9 月ニューヨーク市立大学医学部マウントサイナイメディカルセンター研究員、1982 年 8 月ニューヨーク州立大学バッファロー校研究員、1985 年 1 月労働福祉事業団中部労災病院内科副部長及び人工腎室長、1986 年 5 月同学医学部助手、1997 年 2 月同学医学部附属病院講師を経て、2002 年 1 月同学大学院医学研究科教授、2007 年 4 月同学医学部附属病院長、2009 年 4 月同学副総長、2010 年 4 月名古屋大学予防早期医療創成センター長、2012 年 4 月同学産学官連携推進本部長などを歴任し、2015 年 4 月より現職。
専門分野は内科学一般、腎臓内科学。

■ 片山 英治 氏（野村證券株式会社公共公益法人課 主任研究員 ）

1990 年京都大学経済学部卒業、野村総合研究所入社。2004 年に野村證券に転籍、現在に至る。東京大学大学総合教育研究センター共同研究員、大阪市公立大学法人評価委員会委員、(独)大学改革支援・学位授与機構 大学機関別認証評価委員会委員等を務める。文部科学省 07-08 年度先導的大学改革推進委託事業「大学の資金調達・運用に関わる学内ルール・学内体制の在り方に関する調査研究」共同研究者。著作に「大学ベンチマーキングによる大学評価の実証的研究」（東京大学大学総合教育研究センター・共著）「米国の大学における奨学金と授業料政策」『大学マネジメント』Vol.12 No.7, 2016 年 10 月　等がある。

■ 宮内 忍 氏（宮内公認会計士事務所 公認会計士）

昭和 45 年中央大学商学部会計学科卒業。昭和 47 年東京ＣＰＡ専門学院専任講師、昭和 50 年デロイト･ハスキンズ・アンド・セルズ会計士事務所（現監査法人トーマツ）入所、昭和 54 年公認会計士宮内忍事務所開所、昭和 56 年（株）福祉会計サービスセンター代表取締役就任（現在取締役）、昭和 59 年センチュリー監査法人入所、昭和 63 年淑徳大学社会学部非常勤講師、平成 4 年センチュリー監査法人代表社員就任、平成 15 年あずさ監査法人入所、平成 15 年同監査法人代表社員就任、平成 16 年宮内公認会計士事務所開所。日本公認会計士協会理事、常務理事、副会長、相談役を歴任。現在、文部科学省国立研究開発法人審議会･日本原子力研究開発機構部会長、公益財団法人日本ユニセフ協会監事、国立大学法人会計基準検討会委員等。平成 29 年 11 月旭日小綬章受賞。

■ 林 隆之 氏（政策研究大学院大学 教授）

2001 年東京大学大学院総合文化研究科修了（博士（学術））。大学評価・学位授与機構助手、大学改革支援・学位授与機構准教授、教授を経て、現在、政策研究大学院大学教授。専門は科学技術政策論、科学計量学、高等教育研究。これまで大学評価や研究評価に関する研究および評価システムの設計・運営等に従事。

■ 上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

1987 年大阪大学経済学部経済学科博士課程修了。スタンフォード大学歴史学部大学院修了（Ph.D.）。上智大学経済学部教授・学部長を経て、慶應大学総合政策学部教授、政策研究大学院大学副学長を経て、2016 年 4 月から現職。スタンフォード大学歴史学部・客員教授、東北大学工学部大学院工学研究科客員教授などを歴任。主な著書に『アカデミックキャピタリズムを超えて：アメリカの大学と科学研究の現在』（NTT 出版、読売・吉野作造賞）などがある。専門は、科学技術政策、科学技術史、公共政策、イノベーション政策、高等教育論。

第３回　国内プログラム

【開 催 日】

平成３１年２月１日（金）～２月３日（日）

【場　所】

政策研究大学院大学　想海樓ホール（1 階）、会議室１A・B

【研 修 内 容】

国立大学の主たる使命は教育研究活動にあり、それらの実績をわかりやすく社会に示さなければ、公的・私的資金を継続して得ることはできない。同時に、大学内部でもそれらの情報がなければ、戦略的な資金配分は行いえない。いかにして教育研究実績を測定して示し、意思決定へつなげていくべきであろうか。

第 3 回目は、英国やドイツから大学の教育研究評価や卓越拠点形成の経験や知見を有する講師をお迎えし、評価制度の目的、方法、結果の活用について学び、日本の国立大学の教育研究実績の測定のあり方について考える。

さらに、大学の研究活動と社会との直接的な接点である産学連携やスタートアップにかかる経験を有する講師や、将来の研究イノベーションと社会との関係に専門知識を有する講師をお招きし、経済社会の中での大学の機能と具体的なマネジメント方法について議論する。

【スケジュール及び講義概要】

■1 日目　　平成 31 月 2 月 1 日（金）

12:30-13:00　受付（想海樓ホール）

＜公開セミナー＞『教育研究の卓越性の見える化』

【要　旨】

我が国では大学改革を求める声は 1991 年以降、四半世紀以上続いている。これが「改革のための改革」となって疲弊してしまわないためには、次の段階として、教育研究の実績を適切に把握し、その卓越性を追求していく仕組みへと変わっていかなければならない。大学が教育研究の実績を社会にわかりやすく示すことによって初めて、大学への公的投資に対する理解を得ることができ、民間セクターからの支援を増すこともできるであろう。では、いかにして教育研究の実績や、その卓越性を測ることができるであろうか。

英国は、研究および教育の卓越性（エクセレンス）を評価する仕組みである Research Excellence Framework(REF) と Teaching Excellence Framework(TEF)を順次開発し、その評価結果を運営費交付金配分や授業料設定におけるインセンティブにつなげてきた。本公開セミナーでは、英国から REF を統括する Research England の David Sweeney 氏（Executive Chair）と、TEF を統括する Office of Students の Graeme Rosenberg 氏（Head of TEF）をお招きし、教育研究実績を評価する方法や、それらを通じて教育研究の卓越性を向上させる仕組みについて講演をいただき、日本のあるべき姿を議論する。

13:00-13:10　主催者挨拶

文部科学省科学技術・学術政策局 松尾 泰樹 局長

13:10-13:30　趣旨説明 『大学の研究と教育の評価：今後の行方』

上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

13:30-14:50　基調講演

『What is High-Quality Research in the 21st Century』

David Sweeney 氏（Executive Chair, Research England）

14:50-15:00　休　憩

15:00-16:20　基調講演

『 Measuring and Promoting Teaching Excellence in UK Higher Education』

Graeme Rosenberg 氏（Head of Teaching Excellence Framework, Office for Students）

16:20-16:30　休　憩

16:30-18:00　パネルディスカッション

登壇者：

David Sweeney 氏（Executive Chair, Research England）
Graeme Rosenberg 氏（Head of Teaching Excellence Framework, Office for Students）
林 隆之 氏（政策研究大学院大学 教授）
上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

18:30-　懇親会

■２日目　平成 31 月 2 月 2 日（土）

09:00-09:30　受 付 （会議室１A・B)

09:30-11:30　スペシャル・レクチャー（Workshop）

David Sweeney 氏（Executive Chair, Research England）
Graeme Rosenberg 氏（Head of Teaching Excellence Framework, Office for Students）

11:30-13:00　昼　食

13:00-15:00　講義『産学連携で成功する大学の知財マネジメント』

講師：山本 貴史 氏（株式会社東京大学 TLO 代表取締役社長、国立大学法人東京大学 副理事）

【概　要】

産学連携は現場で起こっている。しかしながら多くの場合、大学の TOP マネジメントは現場の活動を理解していない。産学連携において成功している大学と　中々成果が出ない大学とでは、共同研究獲得・ライセンス・ベンチャー起業支援といった様々な場面で現場の組織体制や知財等を含むマネジメントはかなり違う。しかし、この違いは決して改善にかなりの労力を要するものではなく、どの大学においても直ぐに取り組み可能なものである。成果が出るまでには多くの時間を要するが、どのような組織体制と運用が望まれるかを考え実行しなければ、大学間の産学連携の格差は今後も拡大することが予想される。　今回、東京大学の産学連携の取り組みを紹介しながら、産学連携活動において成功する大学と成果が出ない大学の現場のマネジメントの違いを明確化したいと思う。

15:00-15:10　休　憩

15:10-17:10　講義『アントレプレナーシップ戦略：東大発バイオベンチャー・ペプチドリームのケーススタディ』
講師：菅 裕明 氏（東京大学大学院 理学研究科化学専攻生物有機化学教室 教授、ペプチドリーム株式会社 社外取締役）

【概　要】
本講演では、東大発ベンチャーとしてスタートし、東証一部上場企業まで成長したペプチドリーム社の創業から成長までを、技術ファウンダーであり、創業者でもある菅自らが語ります。アカデミアアントレプレナーとしての注意すべき点、成長する過程での困難さ等、本音での議論をすることで今後大学でのアカデミアアントレプレナーの育成とベンチャー企業創出に向けた法整備等を考えます。

17:10-17:20　休　憩

17:20-18:30　海外プログラム：シカゴ大学研修報告会+Q&A（10 分）
進行：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

■3 日目　　平成 31 月 2 月 3 日（日）

09:30-10:00　受 付 （会議室 1 A・B)

10:00-12:00　講義『国連 SDGs とブタペスト宣言と 21 世紀の科学技術』
講師：有本 建男 氏（政策研究大学院大学 客員教授、科学技術振興機構 上席フェロー、公益財団法人国際高等研究所 副所長）

【概　要】
今年 2019 年は、「21 世紀の科学と科学の利用に関する世界宣言（ブダペスト宣言）」から 20 年になる。その柱である「社会における、社会のための科学」の理念は、わが国を含めて世界の科学技術政策の基盤となってきた。2105 年に国連総会において全会一致で決議された「持続可能な開発目標（SDGs）」の達成に向けて、科学技術がブダペスト宣言を基に、具体的な解決策をどうデザインできるか国際的に大きな期待が寄せられている。これは、「科学のための政策(Policy for Science)」から「政策のための科学(Science for Policy)」に近年その地平を拡大している科学技術の政策動向に通じる。近代科学技術の価値感とシステムは今大きな変革を迫られている。本講義では、東西冷戦終了から今日まで 30 年間（ちょうど平成の時代に当たる）における、科学技術と社会・政策との相互作用のダイナミズムを概観し、その中での大学の役割と責任について意見交換を行いたい。

12:00-13:00　昼　食

13:00-15:00　講義『The German Initiative for Research Excellence as an Accelerator of Change』
講師：Iris Wieczorek 氏（President, IRIS Science Management Inc.）

【概　要】

Universities worldwide are today faced with similar challenges: to maintain, or increase, educational and research excellence in an increasingly competitive worldwide “marketplace“ for research and higher education. To remain competitive, often requires radical organizational changes. But, for academic organizations with their long tradition of democratic decision-making, organizational changes are difficult and often painstakingly slow. Yet, there are examples of universities that have successfully reinvented themselves. And, often, a key success factor was a shift in leadership style from “administrating“ a university as a democratic community of scholars to a more conscious “management“ of universities as a competitive enterprise operating in a global market. In Germany, the egalitarian tradition of academia has been challenged by the German “Initiative for Research Excellence“, an effort launched in 2005, that provides large, highly competitive external funding incentives. From 2019, this effort will further proceed under the label “Excellence Strategy“.

This lecture will provide an overview of the German Excellence Initiative and its outcomes, and will discuss success factors and future challenges.

15:00-15:10　休　憩

15:10-16:10　海外プログラム：ウォータールー大学研修報告会+Q&A（10 分）

進行：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

第３回国内プログラム　講師・講演者紹介

- David Sweeney 氏（Executive Chair, Research England）

  After gaining First Class Honours in Statistics at the University of Aberdeen, David worked at two BBSRC research institutes, as a consultant statistician before developing mathematical models of plant growth. His work on the computational aspects of this led into broader applications of IT in education and research, and he was Director of Information Services at Royal Holloway, University of London, before moving into university leadership as Vice-Principal (Communications, Enterprise and Research) in 2004. In this role he was responsible for research strategy and for developing Royal Holloway's research-led commercial and consultancy activities. He joined HEFCE in 2008 as Director (Research, Innovation and Skills) and led the development and implementation of the first Research Excellence Framework including the new impact agenda element. He was responsible for research policy and funding, knowledge exchange and university/business relations. In May 2017 he was appointed the first Executive Chair of Research England, a new council established as part of UK Research and Innovation, alongside the seven disciplinary Research Councils and the UK Innovation Agency. Research England is biggest research funder in the UK with responsibility for university block-grant funding for research and knowledge exchange. In UKRI he has particular responsibilities for Place (Regional Funding), Commercialization and Open Science.

  David has been invited to visit many countries to advise on research assessment and funding, particularly with respect to research impact. He is also co-chair of the Implementation Task Force for Plan S, the international initiative on full and immediate open access to research publications. David was awarded an honorary doctorate from the University of Aberdeen in 2012, was Vice-Chancellor's Fellow at the University of Newcastle, NSW in 2015 and is a Fellow of the Royal Statistical Society.

- Graeme Rosenberg 氏（Head of Teaching Excellence Framework, Office for Students）

  Graeme is the Head of Teaching Excellence Framework (TEF) at the Office for Students (OfS). He oversees the development and implementation of this new scheme for assessing the quality of teaching in UK higher education. Before transferring to the OfS in 2018, Graeme worked at the Higher Education Funding Council for England (HEFCE), focusing on the evaluation of both teaching and research in UK higher education. He managed the 2014 Research Excellence Framework, including pilot exercises on bibliometrics and the assessment of research impact.

  Graeme has also been Head of Health Education Policy (2015); and led HEFCE's teaching quality assessment functions from 2001-06. This included reviewing the QAA audit method, setting up the National Student Survey, and developing new sources of public information about teaching quality. Before joining HEFCE, he undertook a PhD in History at the School of Oriental and African Studies, London.

■　林 隆之 氏（政策研究大学院大学 教授）

2001 年東京大学大学院総合文化研究科修了（博士（学術））。大学評価・学位授与機構助手、大学改革支援・学位授与機構准教授、教授を経て、現在、政策研究大学院大学教授。専門は科学技術政策論、科学計量学、高等教育研究。これまで大学評価や研究評価に関する研究および評価システムの設計・運営等に従事。

■　山本 貴史 氏（株式会社東京大学 TLO 代表取締役社長、国立大学法人東京大学 副理事）

･1985 年 中央大学卒業後、株式会社リクルート入社
･学生時代ゼミで技術移転を学びこの領域に興味を持つ。
･リクルート入社後は採用関係の営業･企画を約 10 年間担当し、新規事業を担当する企画課長時代、社内の提案制度『経営への提言』で、産学連携による技術移転のスキームを提案し入選。事業化に向けて検証を始動させる。
･米国スタンフォード大学の OTL（Office of Technology Licensing の創始者でその後、MIT･UCB･UCSF の TLO の創設者でもある技術移転のニルス・ライマース氏と独占的なコンサルティング契約を交わし、米国の技術移転に関する研究を開始。
・97 年、大学等技術移転促進法に向けた委員会の委員として様々な施策を提案。
･98 年 7 月新規事業開発室ﾃｸﾉﾛｼﾞｰ･ﾗｲｾﾝｼﾝｸﾞ･ｸﾞﾙｰﾌﾟを新設し事業検証を開始。米国における AUTM 等に参加し、日本における産学連携の実現可能性を検証し、また、世界の国立研究所（NIH・NIST・オランダの TNO・ナショナルテクノロジーセンター）等の技術移転の業務フロー分析も行い、日本の国立研究所との違いを明確化した。
･2000 年 4 月より、リクルートにてﾃｸﾉﾛｼﾞｰ･ﾏﾈｼﾞﾒﾝﾄ･ﾃﾞｨﾋﾞｼﾞｮﾝのﾃﾞｨﾋﾞｼﾞｮﾝｴｸﾞｾﾞｸﾃｨﾌﾞとして技術移転を本格事業化する。
･2000 年 6 月末、㈱リクルートを退社。
･2000 年 7 月 1 日、株式会社先端科学技術ｲﾝｷｭﾍﾞｰｼｮﾝｾﾝﾀｰ（現株式会社東京大学 TLO）代表取締役社長就任。
･2018 年 4 月 1 日、国立大学法人東京大学副理事兼務。
＜他の活動＞
・大学技術移転協議会　理事
・RTTP（国際認定技術移転プロフェッショナル）
<主要著書・論文>
・「理工系のための特許・技術移転入門」（共著）岩波書店
・「動き出した産学官連携」（共著）中央経済社
＜連絡先＞
〒113-0033　東京都文京区本郷 7-3-1
株式会社　東京大学 TLO（CASTI）
電話：03-5805-7661（代）　Fax：03-5805-7699　e-mail: yamamoto@todaitlo.jp

■　菅 裕明 氏（東京大学大学院理学系研究科 教授）

1994 年マサチューセッツ工科大学 PhD。1994 年から 1997 年マサチューセッツ総合病院・ハーバード大学医学部博士研究員。1997 年から 2002 年ニューヨーク州立バッファロー大学 Assistant Professor、2002 年から 2003 年同大 Tenured Associate Professor。2003 年から東京大学先端科学技術研究センター助教授、2005 年から教授。2010 年から同大大学院理学系研究科教授。主な専門分野は、ケミカルバイオテクノロジー。

受賞歴は、2001 年内閣府産学官連携功労者表彰「日本学術会議会長賞」、2002 年日本化学会学術賞、2014 年日本ペプチド学会赤堀メモリアル国際アワード、2015 年科学技術分野の文部科学大臣表彰「科学技術賞・研究部門」、2016 年読売テクノフォーラム・ゴールドメダル賞、ドイツ・マックスバーグマン・ゴールドメダル賞、日本イノベーター大賞特別賞、2017 年名古屋メダルシルバー。2006 年ペプチドリーム社創業、2012 年東証マザーズ上場、2015 年東証一部上場、2016 年日本ベンチャー大賞内閣総理大臣賞他受賞多数、2018 年に社外取締役退任。2017 年ミラバイオロジクス社創業、取締役。

■ 有本 建男 氏（政策研究大学院大学 客員教授、科学技術振興機構 上席フェロー、(公財)国際高等研究所 副所長）

1974 年京都大学大学院理学研究科修士課程修了、科学技術庁入庁。内閣府大臣官房審議官などを経て、2004 年文部科学省科学技術・学術政策局長。2005 年内閣府経済社会総合研究所総括政策研究官。2006 年から、（国）科学技術振興機構社会技術研究開発センター長、研究開発戦略センター副センター長などを歴任。2012 年政策研究大学院大学教授、2015 年科学技術振興機構研究開発戦略センター上席フェロー。2018 年より現職。東京大学、京都大学、早稲田大学、同志社大学等客員教授。仁科財団評議員、東レ科学振興会評議員、本田財団理事、日本学術会議特任連携会員。OECD 科学助言に関する研究プロジェクト共同議長、政府科学助言国際ネットワーク委員、外務省科学技術外交推進会議委員、国連 STI for SDGs Forum 参加メンバー、内閣府 SIP 自動運転プロジェクト副 PD。専門分野：科学技術政策、研究開発ファンディング・システム、科学技術と政治の架橋。

■ Iris Wieczorek 氏（President, IRIS Science Management Inc.）

Dr. Iris Wieczorek studied Japanese and Chinese Studies, as well as Computer Science, at the University of Hamburg, Germany. She has over 25 years of Japan experience, and a broad knowledge about the academic and scientific systems in Europe and Japan. In 2000, she joined the GIGA Institute of Asian Studies in Hamburg, a member institute of the Leibniz Association, where she has been working on comparative assessment of the Japanese research and innovation system. In 2008, she established the Japan Representative Office of the German Research Foundation (DFG) in Tokyo, and acted as its director until 2012. Subsequently, she founded IRIS Science Management Inc., a Tokyo-based consulting firm specialized in research management, policy advice, and support for global cooperation in science and research (IRIS = International Relations In Science). Moreover, she is member of various Japanese research policy committees.

■ 上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

1987 年大阪大学経済学部経済学科博士課程修了。スタンフォード大学歴史学部大学院修了（Ph.D. ）。上智大学経済学部教授・学部長を経て、慶應大学総合政策学部教授、政策研究大学院大学副学長を経て、2016 年 4 月から現職。スタンフォード大学歴史学部・客員教授、東北大学工学部大学院工学研究科客員教授などを歴任。主な著書に『アカデミックキャピタリズムを超えて：アメリカの大学と科学研究の現在』（NTT 出版、読売・吉野作造賞）などがある。専門は、科学技術政策、科学技術史、公共政策、イノベーション政策、高等教育論。

第４回　国内プログラム

【開 催 日】

平成３１年３月１日（金）～３月２日（土）

【場　所】

政策研究大学院大学　会議室３C（3 階）、想海樓ホール（1 階）

【研 修 内 容】

本事業も今年度で事業最終年度を迎える。本研修の最終回となる第 4 回国内プログラムでは、1 年間の研修の締めくくりと同時に本事業の締めくくりの会として総括シンポジウムを開催する。これまで本研修に参加した大学の内、25 の国立大学が現在取り組んでいる大学改革の最前線について紹介を行う。その取り組みについて、これまで本研修に参加した全研修生とともに、今後の課題や国立大学に求められる役割、将来の展望について議論を深める。

【スケジュール及び講義概要】

■1 日目　　平成 31 月 3 月 1 日（金）

08:30-09:00　受 付 （会議室３C）

09:00-09:30　海外プログラム：シンガポール国立大学研修報告会+Q&A（10 分）
進行：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

09:30-09:40　休　憩

09:40-11:30　平成 30 年度大学トップマネジメント研修 総括

12:30-13:00　受付（想海樓ホール）

＜大学改革シンポジウム（公開セミナー）＞『国立大学改革の最前線』

【要　旨】

本シンポジウムは、文部科学省の委託事業「イノベーション経営人材育成システム構築事業」といういかめしい名前を冠しているが、実態としては日本の国立大学の経営層（ユニバーシティ・リーダーズ）を育成するための場として３年前にスタートした。

国立大学が法人化されたのが２００４年。それからすでに１４年という月日が過ぎている。この間、世界の大学の環境は文字通り、激変している。もともと私立の研究大学が大きな役割を果たしてきた米国において、公的資金に依存する州立大学でも、私立大学と遜色ないマネジメント手法を導入するようになっている。また、政府からの補助金で研究と教育を行ってきた欧州の大学でも、グローバルな大学間競争の高まりと、地球規模の知識経済の進展に対応するかのように、どの大学も民間資金の大胆な導入をはかり、大学経営のノウハウを互いに学び合いながら大学の改革を進めてきている。

翻って我が国においては、法人化のプロセスにおける行政的な難しさもあって、大学を組織として経営する意識がなかなか育たなかった。その課題を指摘する声は様々なところで発せられてきたが、どのように大学人のマインドセットを変え、研究と教育の最先端に豊かな資金と社会との接点を広げるすべがあるのか、多くの関係者が悩みつつ大学運営に当たって来たのが現状であろう。このプログラムは、その苦悩を解決する一助となればとの思いから企図されたものである。

３年の間に、毎年２０名を超える国立大学の副学長・学長補佐クラスの大学人に、次世代ユニバーティ・リーダーを育成するこの研修に参加していただいた。国内研修、海外研修、内外ネットワークを３つの柱として行ってきた本研修では、海外のリーダーズを招聘してのシンポジウム、著名な研究大学への訪問研修を通して、大学マネジメントについての様々な知識を共有することができたと自負している。しかしながら、プログラムを遂行するなかでもっとも大きな成果が何かと問われれば、大学の現状への危機感から、海外の事例を学び自らの大学の課題を解決しようとする次世代大学人の、大学を超えたネットワークが蜜に構築されたことだったと答えたい。同じような悩みを抱えながら、日々、学生と対峙し、研究室を運営する大学人がこれほど濃密に大学経営について率直に議論できる機会はほとんどなかったのであろう。参加者のこうした思いは、プログラムを計画した執行部の予想を遥かに超えるものだったと断言できる。

「国立大学改革の最前線」と題するこの総括シンポジウムでは、参加された国立大学の最前線の取り組みを紹介していただくとともに、これからの日本の大学の行方について議論を深める機会としたい。大学の現状を憂える大学人からの真摯な声と理解していただければ幸いである。

司会：小川 哲生（大阪大学 理事・副学長）

13:00-13:10　主催者挨拶

文部科学省科学技術・学術政策局 松尾 泰樹 局長

13:10-13:20　ご挨拶

上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

13:20-13:30　北海道大学における IR の取り組み
北海道大学　長谷山 美紀（情報科学研究科 教授）

13:30-13:40　山形大学のガバナンス改革
山形大学　久保田 功（理事・副学長）

13:40-13:50　産業界と連携した分野横断的な'innovative thinking'は「教える」ことができるか？～ある授業開発の試み～
新潟大学　髙橋 秀樹（人文社会科学系 教授／副学長）

13:50-14:00　茨城大学の教育改革について -DP に基づいた教育イノベーションの推進-
茨城大学　　太田 寛行（理事・副学長（教育統括））

14:00-14:10　筑波大学における大学経営改革の歩み
筑波大学　　猿渡 康文（大学経営改革室 室長／ビジネスサイエンス系　教授）

14:10-14:20　医学部を持たない小規模地方国立大学の取り組み
宇都宮大学　　吉澤 史昭（学術院（農学部） 教授）

14:20-14:30　センター活動を通した群馬大学の機能強化
群馬大学　　花屋 実（副学長／企画戦略室長／大学院理工学府 教授）

14:30-14:40　東北大学の経営改革
東北大学　　青木 孝文（理事・副学長 ）

14:50-15:00　山梨大学の今とこれから
山梨大学　　大塚 稔久 （大学院総合研究部医学域 教授）

15:00-15:10　愛媛大学の産学連携強化に向けた取組
愛媛大学　　野村 信福（学長特別補佐／社会連携推進機構 副機構長）

15:10-15:20　研修を通して学んだことを名古屋大学で実行した取組
名古屋大学　　木村 彰吾（理事・副総長）

15:20-15:30　高知大学におけるオープンイノベーションの土台作り
高知大学　　渡辺 茂（総合科学系副学系長／希望創発センター 副センター長）
　　菅沼 成文（医学部長）

15:30-15:40　京都大学における大学改革の取組
京都大学　　飯吉 透（理事補／高等教育研究開発推進 センター長／教授）

15:40-15:50　研修を生かすための岡山大学の取り組み-その苦悩と希望-
岡山大学　　那須 保友（医歯薬学総合研究科長／研究推進産学官連携機構医療系 本部

15:50-16:00　挑戦した大学改革　長崎大学編
長崎大学　　塚元 和弘（教学担当 理事・教務担当 副学長）

16:00-16:10　佐賀大学の現状（イマ）と未来（コレカラ）
佐賀大学　　寺本 憲功（理事・副学長）

16:10-16:20　躍進百大：広大なキャンパスから世界へ
九州大学　　玉田 薫（先導物質化学研究所 教授／副理事）

16:30-18:00　総合討論
ファシリテーター：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

18:10-20:00　レセプション

■２日目　　平成 31 月 3 月 2 日（土）

08:30-09:00　受付（想海樓ホール）

司会：大竹 尚登（東京工業大学科学技術創成研究院 副研究院長）

09:00-09:10　ご挨拶

小川 哲生 氏（大阪大学 理事・副学長）

09:10-09:20　東工大のガバナンス改革とこれからの課題
東京工業大学　佐藤 勲（統括理事・副学長／理事・副学長（企画担当））

09:20-09:30　東京農工大学の改革の現状
東京農工大学　千葉 一裕（農学 研究院長／農学 府長／農学 部長）
神谷 秀博（生物システム応用科学 府長）

09:30-09:40　東京大学の改革の取組み
東京大学　瀬川 浩司（先端科学技術研究センター 教授）

09:40-09:50　地域イノベーション・エコシステム確立に向けて
静岡大学　木村 雅和（理事（研究・社会産学連携担当）・副学長、イノベーション社会連携推進機構　機構長）

09:50-10:00　大学トップマネジメント研修を振り返って - 広島大学における取組 -
広島大学　渡邉　聡（総合戦略室・副学長（総合戦略担当））

10:00-10:10　地方大学による社会連携と経営への意義
三重大学　西村 訓弘（副学長（社会連携担当）／地域イノベーション学研究科 教授）

10:10-10:20　これからの熊本大学の課題と方策
熊本大学　宇佐川 毅（大学院先端科学研究 部長・工学部長）

10:20-10:30　大阪大学らしい大学改革に向けて
大阪大学　小川 哲生（理事・副学長）

10:40-11:10　総合討論
ファシリテーター：上山 隆大 氏（内閣府総合科学技術・イノベーション会議 常勤議員）

11:10-11:30　修了証授与式

6.3　カリフォルニア大学サンディエゴ校 研修プログラム

University Management Seminar
Program Agenda

Sunday, August 26 (Sheraton La Jolla, California Room on lobby level)

Start Time	Finish Time	Activity	Speaker
4:00 PM		Welcome & Introductions	Mary Walshok, Associate Vice Chancellor for Public Programs and Dean, University Extension
		Background on the University of California System	
	5:45 PM	Evolution of San Diego	

Monday, August 27 (Campus on Villa La Jolla complex, Suite A-124, Green Room)

Start Time	Finish Time	Activity	Speaker
8:30 AM	9:00 AM	Program Registration – **PASSPORTS REQUIRED**	
9:00 AM	9:45 AM	Program Overview	Nathan Owens, Director, Global CONNECT, UC San Diego Extension
9:45 AM	10:45AM	UCSD Administrative Structure • Overview & Senior Management	Mary Walshok, Associate Vice Chancellor for Public Programs and Dean, University Extension
10:45 AM	11:15 AM	Coffee Break	
11:15 AM	12:00 PM	University Research and Regional Development	Martin Kenney (via Skype) Distinguished Professor, Department of Human Ecology, UC Davis
12:00 PM	1:30 PM	Lunch	
1:30 PM	2:30 PM	Building Research Capacity – San Diego State University	Stephen Welter Vice President of Research and Dean of Graduate Affairs San Diego State University
2:30 PM	4:00 PM	Community Engagement	Mary Walshok, Associate Vice Chancellor for Public Programs and Dean, University Extension
4:00 PM	5:30 PM	Faculty Hiring, Retention, & Evaluation	Carol Padden, Dean, Division of Social Sciences Sanford I. Berman Chair in Language and Human Communication

Tuesday, August 28 (Campus on Villa La Jolla complex, Suite A-124, Green Room)

Start Time	Finish Time	Activity	Speaker
8:45 AM	9:15 AM	Debrief of Previous Day	
9:15 AM	10:15 AM	Role of the Executive Vice Chancellor and Deans at UC San Diego	Elizabeth Simmons Executive Vice Chancellor for Academic Affairs and Distinguished Professor
10:15 AM	11:15 AM	Faculty Governance at the Campus and UC Levels • Academic Senate (campus) • Academic Council (UC system)	Farrell Ackerman Chair, Academic Senate; Director, Human Development Program; Professor of Linguistics
11:15 AM	12:15 PM	Walking Tour of Campus	Nathan Owens, Director, Global CONNECT, UC San Diego Extension
12:15 PM	1:30 PM	Lunch at the UCSD Faculty Club	
1:30 PM	2:30 PM	Financial Management at UC San Diego • Campus Budget Overview • Alignment with Strategic Goals • Allocation Models • Indirect Cost Recovery	Sylvia Lepe-Askari Assistant Vice Chancellor, Campus Budget Office
2:30 PM	3:00 PM	Developing a Long Term Strategic Plan • Adapting to Changing Conditions	Angela Song Senior Director, Organizational Assessments and Strategy, Office of Operational Strategic Initiatives
3:00 PM	4:15 PM	Strategic Plan Implementation • Case study of division-level strategic plan development • Tools used • Participant exercise	Kristin Kielich Engagement Manager Office of Operational Strategic Initiatives
4:15 PM	4:30 PM	Coffee Break	
4:30 PM	5:15 PM	SMART Metrics • What SMART metrics are • Participant exercise	Angela Song Senior Director, Organizational Assessments and Strategy, Office of Operational Strategic Initiatives

Wednesday, August 29 (Campus on Villa La Jolla complex, Suite A-124, Green Room)

Start Time	Finish Time	Activity	Speaker
9:00 AM	9:30 AM	Debrief of Previous Day	
9:30 AM	10:30 AM	Measuring and Communicating Economic Impact	Lynette Essey Projects Director, Office of Operational Strategic Initiatives
10:30 AM	10:45 AM	Coffee Break	
10:45 AM	12:00 PM	Recruiting Talent for Senior University Management Positions	Robert Dynes President Emeritus, University of California (2003-2008); Chancellor, UC San Diego (1996-2003); Professor of Physics
12:00 PM	1:30 PM	Lunch	
1:30 PM	2:30 PM	Sponsored Research at UC San Diego	Linda Collins Assistant Vice Chancellor and Director, Office of Contract and Grant Administration
2:30 PM	3:30 PM	Multidisciplinary Research	Miroslav Krstic Associate Vice Chancellor for Research
3:30 PM	4:30 PM	Overview of Innovation and Commercialization at UCSD	Briana Weisinger Startup Advocate, Office of Innovation and Commercialization
4:30 PM	5:30 PM	Discussion with the Vice Chancellor for Research	Sandra Brown Vice Chancellor for Research

Thursday, August 30 (Campus on Villa La Jolla complex, Suite A-124, Green Room)

Start Time	Finish Time	Activity	Speaker
8:30 AM	9:00 AM	Debrief of Previous Day	
9:00 AM	10:00 AM	Financing Capital Projects	Mercedes Munoz Executive Director of Financial and Budget Management
10:00 AM	10:30 AM	Coffee Break	
10:30 AM	12:00 PM	Philanthropic Giving & Community Supporters: • Tax Benefits of Giving • Use of Funds – Research, Endowed Chairs • Scholarships, Naming Rights, etc.	Marlene Shaver CFO, UC San Diego Foundation Carol Chang Chair, Board of Trustees, UC San Diego Foundation
12:00 PM	1:30 PM	Lunch	
1:30 PM	2:45 PM	Alumni Relations	Sean Burns Director of Global Engagement and Advancement, Alumni Department
2:45 PM	3:00PM	Coffee Break	
3:00PM	4:00 PM	Fundraising in Asia	Marilyn Li Associate Director, Alumni Outreach – Asia, Alumni Department
4:00 PM	5:00 PM	Strategic Academic Development Program (SADP) • Recently launched program to create new educational opportunities, including flexible degrees, one-year master's degrees, non-degree offerings, and creative delivery methods	Williams Ettouati Director, SAPD Director, Industrial Relations & Development Associate Director, Center for Drug Discovery Innovation Skaggs School of Pharmacy & Pharmaceutical Sciences

Friday, August 31 (Campus on Villa La Jolla complex, Suite A-124, Green Room)

Start Time	Finish Time	Activity	Speaker
8:30 AM	9:00 AM	Debrief of Previous Day	
9:00 AM	10:00 AM	International Outreach • International Research Collaborations with Industry	Miwako Waga Director, International Outreach, Office of Research Affairs
10:00 AM	12:00 PM	UC San Diego Jacobs School of Engineering • Overview • Industry Relations and Alliances • Alumni Relations and Development	Albert Pisano Dean, Jacobs School of Engineering Jan Dehesh Director of Business Development, Jacobs School of Engineering Cody Noghera Executive Director for Corporate Research Partnerships, Jacobs School of Engineering
12:00 PM	1:30 PM	Lunch	
1:30 PM	2:30 PM	Overview UC San Diego Health Sciences	Douglas Ziedonis Associate Vice Chancellor, Health Sciences
2:30 PM	3:30 PM	Redevelopment of Hillcrest Medical Center	Robert Clossin Director, Physical & Community Planning
3:30 PM	3:45 PM	Coffee Break	
3:45 PM	5:00 PM	Understanding the UC System and California Higher Education	John Aubrey Douglass Senior Research Fellow, Center for Studies in Higher Education, UC Berkeley Mary Walshok, Associate Vice Chancellor for Public Programs and Dean, University Extension
6:00 PM	8:00 PM	Closing Dinner	UCSD Faculty Club Seuss Library Room

Saturday, September 1 (Campus on Villa La Jolla complex, Suite A-124, Green Room)

Start Time	Finish Time	Activity	Speaker
9:30 AM	11:00 AM	Failed Initiatives and Lessons Learned	Mary Walshok, Associate Vice Chancellor for Public Programs and Dean, University Extension
11:00 AM	12:00 PM	Program Wrap-Up and Final Debrief	Mary Walshok, Associate Vice Chancellor for Public Programs and Dean, University Extension
12:00 PM		Program Concludes	

6.4　カリフォルニア大学サンディエゴ校 研修報告

Report of the University Management Seminar

August 26 – September 1, 2018

University of California, San Diego

Provided by: The University of California, San Diego Extension

1 Objectives of the Seminar

The executive training seminar was focused on public research university management and finance issues in the context of reduced public funding. It provided participants with insight into models and best practices currently in place at the University of California, San Diego campus, one of ten in the University of California (UC) system. UC San Diego, is one of the top research universities in the United States. It has a $5.3 billion total budget, 36,600 student enrollments, 2,535 faculty, and over 33,000 staff. Financially, the university has gone through a series of reductions in funding from the State of California over the years, going from 13% of the university's budget in FY2005/2006 to 7% by FY2016/2017. Special attention in this program was given to strategic planning, budget operations, and community engagement issues. Senior management, faculty, and staff from UC San Diego delivered the lectures covering various academic, business, research affairs, and student service divisions of the university. The aim was to provide participants from Japanese public universities with some important lessons learned and possible models for adapting to budget cuts in operational funding from the Japanese government.

2 Program Details

A list of participants is included in the Appendix (Section 4). The program agenda, lecturer biographies, and presentation materials are enclosed as attachments.

3 Session Summary

3.1 Welcome and Introductions

Following the welcome and introductions, the program began with a brief history of the UC system and San Diego. California became a state in 1850 following the Gold Rush and the annexation of new territory at the end of the Mexican-American War in 1848. The foundations of the University of California came soon thereafter. The College of California was established in 1853 as a private prep school, which later became the University of California when it merged with a state-supported school in 1868. The UC system was founded as a land grant university. Under the Morrill Act of 1862, the federal government allowed states to sell or grant land for the establishment of colleges, typically focused on agriculture and mechanical arts. In 1879, the state adopted a new constitution which included granting the UC system autonomy from the state legislature. This constitutional autonomy is a defining feature of how the

institution is governed and managed over the years. However, the state government still retains leverage because of the operational funding it provides to the UC system. The system has expanded to ten campuses across the state over the years, turning what were initially often UC research stations into full college campuses. There was a burst of new campuses in the 1940s through 1960s, benefiting from the post-war economic boom, US federal government military spending as part of the Cold War, and federal investments in basic science research at universities based on a policy developed by Vannevar Bush. In the 1960s, California adopted a Master Plan for Higher Education under the leadership of Clark Kerr. This created a three tier system of community colleges, state universities, and the UC system, all supported by state funding. The Master Plan served the state well until several economic recessions forced the state to reduce its contributions. Population growth, changing demographics, and a more knowledge-intensive economy have also placed challenges on higher education in California. In recent years, the UC system has adapted by raising tuition rates, accepting more non-resident student enrollment who pay a higher tuition cost, expanded the number of Master's and professional degree, and increased the amount of scholarship funding.

San Diego's development was strongly influenced by its geographic characteristics and the interests of those who settled here. The region has limited resources for agriculture and is physically constrained by physical borders (mountains to the east, ocean to the west) and the international border with Mexico. Many early settlers came here for health reasons, hoping to take advantage of the near perfect climate, and had a distaste for dirty, large-scale manufacturing found in many mid-west and eastern American cities at the time. When the US military began looking towards expanding its presence in the Pacific around the turn of the 20th Century, city leaders were quick to embrace what they perceived as a clean form of economic development and greater national visibility. They successfully lobbied to have large naval bases established. Following the end of the Second World War and during the early days of the Cold War, the then director of the Scripps Institution of Oceanography pursued the creation of a science and engineering-focused university. The result of his efforts was the founding of UC San Diego in 1960 as a comprehensive university that maintained a strong research orientation. It grew rapidly and is now among the top research universities in the country.

3.2 UC San Diego Administrative Structure

Organizationally, UC San Diego has three components: "General" Campus, Health Sciences, and the Scripps Institution of Oceanography (SIO). General Campus covers the traditional academic units. Health Sciences includes the School of Medicine and the healthcare delivery functions of the university such as the hospitals and clinics. SIO, being the founding part of the campus and the graduate school for ocean sciences is treated as distinct. Organizational charts for the senior administration showing the various vice chancellors and their direct reports were discussed. At the core is the Chancellor and the eight Vice Chancellor positions. The number of Vice Chancellors has grown over time as the university has needed to adapt to new financial and/or social conditions. A prime example of the latter is the office of the Vice Chancellor for Equity, Diversity, and Inclusion, which is important given the socio-demographic profile of California's citizenry, as well as the composition of the university's faculty, staff, and students. The Executive Vice Chancellor (EVC) for Academic Affairs is considered the second highest position. On the "business" side of the institution, the campus hired its first Chief Financial Officer (CFO) following the previous round of state budget reductions. The CFO implemented important changes to how the university manages its finances and accounting. The CFO is considered to be the most important non-academic staff position.

3.3 University Research and Regional Development

Martin Kenney of UC Davis provided an overview of some of the impacts a research university can have on the economy of its surrounding region. This is an important consideration for understanding a university's contributions to society. The university is one of society's oldest enduring institutions, with a long history of developing new technology in addition to the education it provided. As the economy has become more knowledge-intensive, universities have become increasingly more important. American universities created a tradition of combining research and undergraduate teaching that differed from their European counterparts. The United States also lacks a central ministry that has a high degree of control over universities. This has led to a competitive environment among universities for attaching students, faculty, and funding. Universities are also seen as a mechanism for enabling upward social mobility, a place where culture is preserved, and for creating different values for society. Among those values is economic development, as enabled through the transfer of commercially viable research. This builds on a long history, with key examples such as the outcomes of word done by Galileo and Pasteur. Interest in technology transfer accelerated in the 1980s and 1990s as universities set up offices to handle patenting and licensing. However, it turns out that licensing income has not made much of an impact for the

majority of universities. Only a few universities generate income from royalty payments, and those payments come from a small number of technologies. More recently, there has been a shift towards entrepreneurship and the encouragement of faculty or students starting companies. There is a track record of many successful companies that have ties to university-affiliated founders. There are also different models for how this takes place, with the models being strongly associated with the dynamics of the industry in which the technology is commercialized. Examples include the biotech model, which is very linear, involving the licensing of a university patent to a company. The software model is more non-linear in comparison, with the technology being iterated upon by individuals both internal and external to the university in an open source fashion. No technology transfer office is usually involved in these cases. There is also knowledge transfer and the impact that can make on an industry. In this case, the development of Napa's wine industry has strong linkages with education, training, and research services provided by UC Davis professors. Nearly 80% of Napa's wine makers were trained by UC Davis, and over the years, UC Davis has been instrumental in providing new grape varieties and optimizing them for specific growing conditions. The wine industry in Napa now generates $5 billion in sales, plus an additional $1.2 billion in tourism spending. Knowledge transfer also takes place when university personnel take their information with them when they work in industry, either by working for companies or providing consulting/advising services. This has led to the development of new technology clusters in California. In San Diego, both the wireless industry (Irwin Jacobs with Linkabit, and Ivor Royston with Hybritech) and the biotech industry clusters have roots to UC San Diego professors who started companies that later gave birth to numerous other companies in a cascade-like fashion. The session concluded with some final thoughts about the role of universities in their regional economy. Research and teaching are still paramount functions. However, interaction with local industry is important, and the administration should encourage, but not force, closer ties. Having successful role models is critical. They can assist successive generations learn valuable lessons.

3.4 Building Research Capacity – San Diego State University

Stephen Welter, Vice President for Research and Dean of Graduate Affairs, described how San Diego State University (SDSU) became the leading research university among the 23 California State University (CSU) campuses. SDSU does not fit the model of a state university as envisioned in the Master Plan for Higher Education. CSUs were intended to be more practically oriented, non-research focused institutions. Initially, only UCs were able to offer PhDs. However, SDSU now offers joint doctorate degrees in

several areas and even its own doctoral in certain professional areas. It has a $134 million research budget, which is about half of the total amount of research in the CSU system, and it gets more research funding from the National Institutes of Health (NIH) than UC Riverside, UC Santa Barbara, and UC Merced. About half of SDSU's research funding comes from NIH sources.

SDSU achieved its research excellence despite significant challenges in recent years. In 2008, the state cut 50% of its funding to the CSU system, which was a huge financial blow to absorb. SDSU has also had to replace 40% of its faculty in the past five years, and saw a decrease in those that were tenure track professors until 2016. Yet, it has seen its research productivity increase. The number of proposals has increased, total research funding has increased, as has the ratio of research funding per faculty member.

Several strategies have enabled this research success. One was to focus on areas of excellence and implement cluster hiring. In a cluster hire, multiple people are hired at the same time to do team science, which has been shown to outperform work done by individual researchers. The cluster hires come from multiple disciplines and represent multiple departments or colleges within SDSU. Criteria for selecting the hires and what sorts of work will be done are determined at the department level. The approach appears to be working. Teams form strong bonds and are even starting to establish "clusters of clusters" by working with other teams that were formed from a cluster hire. Another strategy has been to help early-career faculty not just write grant proposals, but actually win them via a fellowship program called the Grants Research and Enterprise Writing (GREW). Faculty who went through GREW have a grant acceptance rate of 40%, which is above the national average of about 20%. SDSU has also implemented an incentive program where a portion (10-20%) of overhead from research grants goes back to the department for discretionary use, such as to reinvent in the lab, support postdocs, or pay summer salary. Finally, engaging philanthropy has also proven to be an effective strategy for funding research. SDSU recently completed its latest fundraising effort, having raised $815 million, well above the $500 million goal. Some of this money is used for endowed chairs, where a $2 million donation is put into an account and the interest generated can be used to support faculty salaries. Endowments for graduate students and research efforts have also been set up with philanthropic donations.

3.5 Community Engagement

Community engagement is the public-facing element of the university. Those external to the university interact with it for different things. For instance, industry needs employees with the right skills. Healthcare services provided by a university improve the quality of life for those who live nearby. There university can also offer professional certifications for career development, and lifelong learning so that people can stay intellectually engaged as they get older. The university can also play a role in civil society. This can be done by acting as a convener for meetings or events, providing a venue for discussions, or having faculty or staff contribute to civic discourse through their research. Community engagement is woven into the land grant university tradition in the United States. Universities established under the land grant system received land and financial support in return for providing practical training and education, usually with an agricultural focus to improve productivity, but also in the mechanical arts. Over time, universities expanded the types of services it offered to include healthcare (via hospitals and clinics), industrial affiliate programs to link knowledge within the university to industry, developing internship programs or community service opportunities, alumni relations, continuing education, technology transfer, and business incubation among others.

The Extension division of UC San Diego is the continuing education arm of the university, and one of the more "outward-facing" units of the campus. It provides education and training opportunities for those anywhere between 18 years of age to 80. It is also fully self-supported, funding itself through course tuition, fees, and contracts, making it a revenue-generating part of UC San Diego. In addition to its classes, UC San Diego Extension manages UC TV, a digital television network that creates programing for the entire UC system. Its programs receive about 5 million views per month, and its YouTube channel alone has nearly 400,000 subscribers. As part of its community-serving mission, UC San Diego Extension is spearheading the building of a new location in downtown San Diego on behalf of the campus. The new building will create a connection point for people in the community who may not have interacted with UC San Diego before. In addition to classes being offered at the new location, there will also be frequent events related to arts, culture, and lecture series. As a last example, UC San Diego Extension also manages several pre-college programs for those in the kindergarten through 12th grade range. This includes programs to prepare high school students for college, entrance exam preparation offerings, and Sally Ride Science to stimulate greater interest in science among children.

3.6 Faculty Hiring, Retention, and Evaluation

Carol Padden, Dean of Social Sciences, began by providing an overview of her division. Social Sciences has nearly 40% of all undergraduate degrees awarded by UC San Diego. These degree programs are housed within ten academic departments. The division has 230 faculty, 640 graduate students (most of whom are PhD candidates), and 7,600 undergraduate students. Within UC San Diego, it is the most "efficient" division in that it has the most number of undergraduate students taught by the fewest number of faculty. Many of the graduate programs in the division are highly ranked. Despite its strong reputation, it still has to fiercely compete against other top universities to attract the best faculty and students. The division has a $10.7 million budget for faculty salaries and operations. Dean Padden described the various staff positions within the division office. That includes two Associate Deans who assist with faculty reviews. About one-third to one half of the 230 faculty are evaluated for tenure or promotion annually, so this workload is significant. There is also a lot of competition when a new position is offered. It is not unusually to receive 600 applications for a single job opening.

Dean Padden then turned to describing the process for faculty hiring and retention. This begins with a department recommendation to the Dean's office. If the Dean concurs, a recommendation to the EVC's office. The EVC receives a report from the Committee on Academic Personnel, which is a confidential committee of faculty from across campus. For all hiring, promotions, tenure, and acceleration decisions, the Committee on Academic Personnel review and evaluate candidates for quality of research, teaching, and service. Members of this committee are made by the Academic Senate, which is unusual for an American university. It is more typical for deans to appoint members to personnel committees rather than an academic senate. At UC San Diego, the Committee on Academic Personnel can override a dean on issues. As such, deans have less power than their peers at other universities. If the Committee on Academic Personnel approves, as does the EVC, then the recommendation for hiring/promotion goes to the Chancellor's Office for final sign off. In a situation where the EVC and the Committee disagree, the EVC can overrule the Committee with the Chancellor's support. However, the EVC must go before the Committee and explain the reason for the decision. While a lengthy process, having four levels of approval has its benefits. It provides for a thorough review and can shield a dean or department from a potentially ugly situation since they are not the only ones who must approve. When reviewed, faculty get two opportunities to show they are contributing. If no change is determined at the end of the second review, it triggers a special third and final review. Dean Padden noted that such instances are very rare. About 85% of tenure cases get approved. UC San Diego tends to hire high performing individuals and there is also

some peer pressure to be productive so that you are seen to be keeping up with your colleagues.

3.7 Role of the Executive Vice Chancellor (EVC) at UC San Diego

The Executive Vice Chancellor (EVC) for Academic Affairs is considered to be the second most important position after the Chancellor at UC San Diego. For instance, the EVC runs the university in the absence of the Chancellor. One of the major functions of the EVC is to review all personnel decisions, e.g. hiring, promotions, tenure reviews, etc., that take place. There are about 700 decisions that need to be made each year. The EVC is also involved in all major planning issues. A Vice Chancellor (VC) will meet with the CFO to discuss the budget, and if things look good, the VC will then meet with the Chancellor to discuss. The EVC is present in those meetings. However the planning process is mostly centralized with the Chancellor and the CFO.

Elizabeth Simmons joined UC San Diego as EVC in September 2017, coming from Michigan State University. In the interview-styled session, EVC Simmons noted that higher education institutions in the United States are facing different issues depending on their location. The number of high school graduates peaked about ten years ago, resulting in many universities having to compete for fewer students. However, there is strong demand in California because of demographic reasons. The UC campuses tend to have significantly more applications than there are spaces available. Another challenge facing universities is dealing with incoming students who are not sufficiently prepared. These students are smart and eager to learn, but have a hard time keeping up with the pace and level of college courses. Universities and faculty therefore need to provide resources to support these students. Turning to a different topic, EVC Simmons discussed the balance between research and teaching responsibilities at a major research university like UC San Diego. She noted that there is wide diversity of fields at a comprehensive university. There must be recognition that there are differences between those fields in how to judge the excellence of faculty, while making sure that the faculty can teach well. At the same time, one needs to understand that some faculty will teach better than others and that some need to spend time on research. So the balance can be like walking a tightrope. In the end, she noted that a university should want its faculty to be good at teaching for the amount of teaching that is being asked of them. These requirements, meaning the amount of teaching and research asked of faculty, are set by the faculty at the department level. Service is another factor in evaluating faculty, and that component tends to become a bigger component as one becomes more senior.

EVC Simmons then described faculty hiring and reviews. There are four major professor ranks (adjunct, assistant, associate, and full) and steps within each rank. Every rank and step has a set compensation level, with the compensation increasing as one goes up the ladder. Reviews are held to assess where the faculty member is at and how well he or she is progressing. If they are performing well, they can jump steps. The EVC meets every week with the chair of the Committee of Academic Personnel to discuss the files the Committee reviewed the prior week, which usually total about 25. The EVC then makes a decision to approve or not before sending it on the Chancellor's Office. Instances in which the EVC disagrees with the Committee and overrules their decision are rare, perhaps happening in 1% of cases. Those are usually about half-step salary bonus considerations and not usually about whether to grant tenure or not.

In a question about evaluating the work of faculty in areas outside of her expertise, EVC Simmons answered that she gained a lot of insight while serving as dean in an interdisciplinary department. She had to learn as she went, but she frequently consulted with colleagues who had relevant expertise, observed what her peers said, and took training courses offered by a professional association. At UC San Diego, she also learns a lot from her conversations with the chair of the Committee on Academic Personnel. She noted that serving on that committee is a good training ground for those that want to move into administration.

EVC Simmons concluded the session with comments about one of the strengths of the UC system is that it has been careful to write down its policies and procedures to ensure transparency and consistency. Each campus can make small adjustments to those policies to fit its needs. The emphasis on faculty governance is also a real strength, particularly at UC San Diego. It provides another level of review on the administration.

3.8 Faculty Governance at the Campus and UC System Levels

The UC system has one of the stronger systems of shared governance compared with other American universities, with the faculty gaining a larger role when the UC Regents began delegating functions to it in the middle of the 20th Century. It is unique in terms of its power versus the administration and the state legislature. The Academic Senate is the maintainer and advisor on academic values and policies. It approves course curriculum and structure, as well as sets requirements for student admission and graduation. The Senate also advises on budgets as the affect the academic mission. The UC President is the pivotal coordinator and negotiator with the state, channeling the

input from the Senate and Board of Regents. This structure helps the ten campuses speak with one voice, having resolved their differences internally.

There is a two-tiered structure of faculty governance in the UC system. There is the Academic Senate at the UC system-level comprised of representatives from the ten campuses. It is led by a Chair and Vice Chair and has 22 standing committees to set policy. The Senate meets once a month in Oakland. There is also the Assembly of the Academic Senate, which is a legislative body to provide wider representation to departments, schools, and colleges.

Each campus has its own divisional Academic Senate. The Chair of a campus Academic Senate is the representative for that campus at the UC system Academic Senate. The Chair and Vice Chair of a campus Senate is elected by the faculty and serves anywhere between one to four years, depending on the campus. It is an autonomous body, equal to the Chancellor for matters within its purview. Each campus Senate also maintains numerous committees to review new proposals for courses, degrees, faculty hiring, etc. Among these is the Committee on Committee. While oddly named, it is one of the most important committees since it is responsible for the complicated process of appointing faculty to serve on the other committees. The campus Senate is also supported by staff. The staff provide the infrastructure and institutional memory that enables the Senate and its committees to function effectively. At UC San Diego, a lot of time is spent maintaining a good working relationship between the Senate and the administration. The Chair and Vice Chair meet with the Chancellor and EVC frequently and they work collaboratively to build a vibrant community on campus.

The campus Senate and its various processes can be complicated and slow moving at times. However, it provides an important check and balance. It allows for a deliberative approach. While there is tension inherent in these processes, on the whole it is one of the reasons for why UC San Diego has become such a strong university.

3.9 Financial Management at UC San Diego

The session began with an overview of the key staff responsible for budget and finance decisions at UC San Diego. The university has a total budget of $5.3 billion, with $2.5 billion of that coming from Health Sciences, which includes medial teaching, research, and healthcare services provided by the hospitals and clinics. The core operating budget for UC San Diego is $1.4 billion, and research funding is approximately $1 billion. Financial management decisions are guided by the five strategic goals that were adopted a few years ago. The campus-wide goals are reinforced by tying the allocation

of resources to how they align with the goals. Over ten years, UC San Diego's revenue mix in terms of percentage by source has change significantly. The state only provides 7% of the budget, whereas ten years ago it provided 13%. Tuition revenue from non-resident students grew dramatically from 1% of the budget to 7%. The clinical enterprise also grew from 35% of the budget to 42%. Undergraduate enrollment growth has been a big driver for a lot of budget considerations. Applications have doubled since 2012 and enrollment has increased 26% to over 28,000 in the same time period. This requires additional investments in personnel, facilities, housing, and other services to accommodate the increase.

Developing the campus budget follows a process and 18-month timeline that parallels the UC system/state budget process. Consultations are made on campus, which are then fed up to the UC Office of the President (UCOP). UCOP then develops a proposed budget for the system, which is submitted to the Governor's office. The Governor incorporates that request into his overall state government budget, which is then provided to the state legislature for review, revision, and approval. Once the state budget is approved, funds flow back to the campus. The discussion then turned to recent investments and goals under a ten-year plan. Within that plan is a goal to hire 150-200 new faculty by 2022, meeting the enrollment goal of 40,000 students, investments in infrastructure, and new sources of revenue to make up for the declines in state funding. Lastly, the session touched on indirect cost recovery (ICR), which is an important financial issue for a research-intensive university like UC San Diego. The ICR rate on federal R&D grants is negotiated with the US government. The current approved rate is 55%, although the "true" calculated rate is 62%. The campus negotiated an increase to 58%, which will be phased in over the next few years. The speaker then discussed how those funds are distributed throughout campus.

3.10 Developing a Long Term Strategic Plan

Prior to Pradeep Khosla becoming Chancellor, UC San Diego did not have an overall strategic plan. Chancellor Khosla felt that such a plan would help create a unifying vision, establish clear priorities, and help the campus react better to changing conditions. That began a 15-month process to gather data, conduct outreach and solicit feedback from a large number of stakeholders, formulate the goals, and develop a roadmap for implementation. Once completed, the plan had a clear mission and vision statement as well as five overarching strategic goals. However, getting agreement on the mission and vision statements took weeks to sort out. Ultimately, the Chancellor

ended up making the final decision on the wording. The end result is a living document, where changes can be made based upon the needs at the time.

3.11 Strategic Plan Implementation

Implementation of the strategic plan is enabled by linking the allocation of budget resources to how the activity or initiative would align with one or more of the goals. Buy-in and support from the Chancellor has also been critical to seeing individual departments follow through on the strategic goals. ArtPower, a performing arts organization on campus, asked the Office for Operational Strategic Initiatives (OSI) for assistance in developing their own 3-5 year strategic plan that aligned with the campus goals. This was presented to participants as a case study. A project timeline was developed, and then surveys and numerous interviews with campus stakeholders were conducted. From this, OSI staff worked with ArtPower on a SWOT analysis of the finding. This led to a process of aligning the findings with the campus strategic plan using a balanced scorecard approach to define core values, as well as the mission and vision statements. The participants then conducted an exercise with the EcoCycle methodology to analyze programs, strategies, and stakeholder relationships as one begins thinking about adoption and implementation. Key lessons learned from the implementation process are the importance of support from leadership, engagement beyond the academic community, assigning clear leadership and responsibility for each initiative, and define clear program management and methods to track implementation.

3.12 SMART Metrics

Once a strategic plan is developed, metrics are needed to track progress and ensure accountability. Such metrics should be specific, measurable, actionable, relevant, and time-bound (SMART). Not all metrics are good or useful, however. Examples highlighted what makes for a better metric. The participants engaged in an exercise to develop metrics for one of UC San Diego's goals, and then compared those to the metrics the campus is currently using.

3.13 Measuring and Communicating Economic Impact

In 2008, UC San Diego released a report showing its economic impact. The report, using data from FY2006-2007 and written by the consulting firm CBRE showed that for

every dollar invested in the university, an additional $30 were generated via things such as university expenditures, wages, capital improvements, student spending, healthcare-related spending, and other means by which the money flowed into the economy at the city, county, and state levels. These impacts were calculated using an IMPLAN model, a widely-used software package developed by a third party, and accounted for direct, indirect, and induced impacts. This was done to provide a quantifiable measure for the role of the university and its value to the broader community. The report also enables advocates to communicate what the "return on investment" is for money put into supporting research and education. Audiences include students and their parents, alumni, industry (particularly corporate donors), grant funders, and government.

A new report with updated data is expected to be released in the next few months. A different consulting firm, Tripp Umbach, was selected for the new study after a competitive bid process. The cost for the study is in the range of $65,000-$80,000. UC San Diego provided the data, which helped keep the cost lower than what it would have been otherwise. The new report will put more emphasis on both visuals, presenting the data in clear and bold ways, and on narratives that tell stories about the universities effect on the economy. The previous report provided lots of important data, but seemed rather dry. A comparison with economic impacts done by other universities highlighted elements that could be done better. The new approach will hopefully aid in making the data more accessible and relatable. When completed, the report findings will be segmented by audience, focusing on the data that is most relevant to that audience.

3.14 Recruiting Talent for Senior University Management Positions

Robert Dynes served as President of the University of California (2003-2008). Before that he spend 13 years at UC San Diego, first as a Professor of Physics (1990-1995), then as Senior Vice Chancellor for Academic Affairs (1995), and finally as Chancellor (1996-2003). Prior to that, he worked at Bell Labs from 1968 to 1990. During his time at Bell Labs, he came to understand the philosophy behind research, development, & delivery (RD&D), with the delivery portion meaning moving the new technology into actual use in society. This approach has greatly influenced his view toward to his work throughout his career, and it is something that he looked for in others when he built his management teams. This is particularly important in a public university that has a mission to make a positive impact.

President Emeritus Dynes believes that it is important that those in senior management positions should have an appreciation of academic culture. Academic experience and credentials are not needed for every position, such as CFO for example, but it can be critical for others. A reference for the academic world is important regardless, however. People who are motivated to do good by the institution, not just themselves, are ideal. Dynes commented that when recruiting for a senior administrative position, there are advantages and disadvantages to looking internally and externally. An external search is good if one wants a large pool of people with a wide range of experience. However, Dynes suggested to avoid an external search unless the university is well connected to the community it wants to recruit from. Otherwise, it will have limited knowledge of the people it is considering in comparison to how well it knows those when recruiting internally. Search firms can help with an external search, but Dynes cautioned that the university is ultimately responsible for what happens. It should not compromise on a candidate. The university needs to have a high degree of confidence that it is making a good hire. If there are any red flags when reviewing a candidate, stop, and start the search over again with new candidates. He also commented that good candidates will usually place the amount of compensation as the the third or fourth most important criteria. They usually want to know who their colleagues will be, who they will report to, and what the climate of the institution and quality of life in the area are like. Compensation amounts usually follow these considerations.

Dynes noted that his own thinking on administration evolved during his career. Richard Atkinson, who was then Chancellor of UC San Diego, recruited Dynes from Bell Labs, and Atkinson had in mind early on that Dynes would eventually fill a senior administrative position. Dynes was attracted to UC San Diego because of its vibrant culture, with great people who were putting RD&D into action. Atkinson encouraged him to interact with multiple parts of campus so that Dynes could learn about what was going on in different disciplines. Dynes as also asked to be on various search committees, review committees, and advisory boards, giving him additional exposure to administration and the breadth of the university. Dynes was motivated to get involved in administration because it seemed stimulating and fun. He helped build the institution, being involved in the founding of new labs and even schools. When he became Chancellor, he then looked for people who had similar experiences to himself.

The session also touched on Dynes' role since he retired from being President of the UC system in 2008. He returned to UC San Diego where he maintains an affiliation with the physics department. He is still actively involved in research and also advising the university's administration. However, it is important to note that he is not paid for this work. This is done purely on a volunteer basis. University policies and the Academic

Senate provide a check on retired senior leaders to prevent undue influence. With that check, these retired leaders can still be an important part of the university's administrative infrastructure, passing their knowledge and experience on to others.

3.15 Sponsored Research at UC San Diego

Sponsored research at UC San Diego follows a lifecycle beginning with pre-award activities, conducting the research once and award has been granted, and the closing out the award. The Office of Contract and Grant Administration (OCGA) provides support to researchers all throughout this lifecycle. This is fairly extensive given the scale of UC San Diego's research. During FY2018, the university hit a record amount of research funding, totaling $1.21 billion from a variety of sources. This marks the fifth consecutive year of funding over $1 billion, and the university is ranked 7th in the nation for federal research expenditures according to the HERD survey. The majority of funding comes from federal agencies, with NIH being the largest. Industry support amounted to $193 million, or 26% of total research funding. Multidisciplinary research increased by $56 million to $241 million in total. The number of proposals also increased by 161 to 4,881, with a 39% success rate.

OCGA staff help faculty and staff in a variety of ways, including reviewing proposals, negotiating terms in agreements with a variety of sponsor types (government, industry, non-profit organizations, other universities, etc.), and collecting and reporting data on the research enterprise to stakeholders. OCGA also has offices in different parts of campus to provide specialized services to different departments, such as those in Health Sciences and SIO. Since industry sponsors often have different processes and expectations, OCGA staff work with faculty to help reach an agreement that works for all involved. Lastly, to streamline a lot of internal processes, OCGA has developed several web-based systems for departments and PIs to submit proposals and agreements for review and approval.

3.16 Multidisciplinary Research

Senior Associate Vice Chancellor for Research Miroslav Krstic began the session by describing several mechanisms UC San Diego uses to promote multidisciplinary research. These include Organized Research Units (ORUs), the Center Launch Program which enables faculty to pursue large grants to establish new research centers, the Frontiers of Innovation Science Program, Academic Senate research grants, and support for work in the arts and humanities as well as the social sciences. The majority

of the session was devoted to ORUs. There are 17 ORUs within the "general campus", plus a few in Health Sciences. ORUs are like a department, but they are not permanent and do not have any teaching responsibilities attached to them. To ensure that it is truly multidisciplinary, the ORU must bridge two or more Dean or Vice Chancellor areas. Once established, ORUs are financially supported via the indirect cost (IDC) it generates from the research grants is researchers are awarded. Dr. Krstic provided a breakdown of IDC, showing how out of the 55% charged to the grant, the actual amount for allocation turns out to be 6% per dollar awarded. This is because IDC is not applied to tuition and equipment, and about 74% of IDC goes to pay for items such as bills, loans, libraries, etc. The amount of grant revenues from ORUs varies from $31.5 million for the San Diego Supercomputer Center (SDSC) to $260,000 for the Center for Iberian and Latin American Studies (CILAS). This is not a strict formula. Money from IDC generated from the larger ORUs is used to support operations costs of the smaller ones. To ensure that ORUs are fulfilling their mission and operating effectively, reviews are completed about every five years and involve several stakeholders, including committees of the Academic Senate. A thorough, approximately, year-long review process was adopted to ensure an independent, transparent, and objective decision is made. This came about because of controversies in the past when ORUs were terminated and the rationale for those decisions was not clear to everyone. There are four possible outcomes for a review: 1) A five-year extension; 2) Termination; 3) Transitioning the work of the ORU to a center under a Dean or academic department; and 4) a three-year probationary period where the ORU must attempt to address shortcomings, followed by another review. Key metrics for evaluating an ORU are research productivity, relation to other academic units, governance and inclusiveness to other disciplines (i.e., it must truly be interdisciplinary), and diversity and equity. Shutting down an ORU can be a traumatic event, so to ensure that the system is functioning properly, a full evaluation of the system takes place about every 2-4 years. There have been four reviews in the past decade. While a bit cumbersome, it has helped maintain the credibility and integrity of the ORU system.

3.17 Overview of Innovation and Commercialization at UC San Diego

UC San Diego has made major efforts to develop and promote a strong ecosystem for innovation and entrepreneurship across the campus. Like the structure of the university itself, this has largely been done via a decentralized model. However, more recent efforts have tried to better coordinate these activities and make resources available campus-wide to support faculty and students. Example elements of the ecosystem include maker spaces, events and competitions, funding programs,

incubators/accelerators, information portals, and other means of assistance. The ecosystem of support is now fairly broad, and offers services for different stages of development depending on the need of the founding team or individual. There has also been increased effort to collaborate with external entities involved in entrepreneurship so that there is a continuum of support once an idea or startup begins its path to market.

Administratively, much of this activity is coordinated through the Office of Innovation and Commercialization (OIC). OIC was formed four years ago as part of a restructuring to improve commercial outcomes from university research, as well as to give greater visibility to innovation and entrepreneurship across the campus. This was recognition of the fact that commercialization is more than just licensing, and that the university plays a large role in the San Diego region's economy because of the talent it develops. OIC is focused on developing a culture of entrepreneurship and entrepreneurial thinking on and off campus, rather than be limited to just technology transfer. The restructuring included creating a new Associate Vice Chancellor (AVC) position and having the campus technology transfer office report to the new AVC. In the past, technology transfer reported directly to the Vice Chancellor for Research. Besides the work related to technology transfer, OIC looks to streamline processes and policies (called "open flow innovation" by OIC), increase education and awareness among students and faculty, and promote greater coordination of activities across the campus. It has launched its own initiatives, such as hosting conferences and events, hired several external experts to serve as entrepreneurs-in-residence to coach and mentor those on campus, and the development of new certificate programs and short courses.

3.18 Discussion with the Vice Chancellor for Research

Sandra Brown, UC San Diego's Vice Chancellor for Research, held a Q&A-style session with the participants. She began by provide some information on herself. Her background is in psychology, which is unusual for this type of position. Vice presidents for research often come from the basic sciences. However, having an understanding of administrative skills and multiple approaches in research is what is important, rather than what academic disciple one comes out of. Experience working with multiple disciplines is an advantage in this role, as well as understanding how funds are managed differently in different parts of the university. That she is a woman is also unfortunately unusual. Only about 15% of vice presidents of research at US universities are women. When asked if her background in psychology was helpful in her position, she said that understanding issues around conflict management can be

helpful, although that depends on the nature of the problem. If a conflict arises within a department, then the department chair usually takes care of it. However, her office becomes involved it the conflict goes beyond the department. She then acts as a mediator. Dr. Brown also noted that she continues to be involved in research in her field, which again is another unusual aspect for someone in her position. She is currently co-principle investigator (PI) on two large research consortia. She has some time each week set aside for these projects, but her co-PI handles most of the day-to-day work on them. Still being engaged in research has a benefit in that it can make it easier to relate to faculty when looking at ways to support their work.

Part of her job is to be in communication with the other VCs of research at the other UC campuses. While the research portfolios at the campuses vary in size and scope, they all have to follow the same rules. To that end, they hold a conference call once per month and then meet in person three times per year. They discuss their challenges and share lessons learned. These discussions also enable opportunities to partner for grands. They also discuss issues that they may want to bring up to the UC president.

Like most senior positions at the university, her term as Vice Chancellor for research is for five years. She is currently in her second year of her second five-year terms. The position is by appointment by the Chancellor and is subject to a comprehensive review at the end of the term, should the current VC and the Chancellor wish to continue for another term. This review involves all deans, the academic senate, representatives from the research centers and institutes on campus, as well as external stakeholders such as industry, other universities, and government representatives. Dr. Brown's review involved about 180 people. At the end of the review, a report summarizes all the comments and provides a recommendation on whether the term should be renewed. This is submitted to the Chancellor for a final decision. Dr. Brown was motivated to seek a second term so that she would have the time to see the changes she put in place during her first term take hold and come to fruition. For instance, significant changes were made to the way technology transfer is managed. This took six years. Another example is the expansion of multidisciplinary research. She said that going forward, she would like to help the university do a better job getting the outcomes of its research into society.

Decisions about policies or research priorities come about in discussions between the EVC, the VC of Health Sciences, and the VC of Marine Sciences. These academic leaders look at where research is heading and how it aligns with the campus's strategic goals. Dr. Brown's job is then to facilitate so that PIs can conduct projects that fall with those goals. The strategic planning process is also helpful in identifying areas where the campus can make important new hires.

3.19 Financing Capital Projects

How the university currently finances capital projects is a clear example of a response to reductions in funding from the state. UC San Diego has many needs in its capital plan. There are buildings that are reaching the end of their lifecycle and need to be replaced. There are also unfunded state mandates, such as new seismic codes or environmental regulations that require changes to current buildings, or a new building to be constructed if it is less expensive than retrofitting an existing building to be in compliance. Enrollment growth also drives demand for new buildings. In addition to construction, there is also a backlog of operations and maintenance across campus. In the past, the state provided about 40% of the funding for capital projects. However, following the cutbacks after the 2008 recession and the need for the state to reduce its overall bond debt, it now provides almost no funding for capital projects in the UC system. In 2013, the UC Regents took over managing $200 million of the state's general obligation bond debt since it had a better credit rating that the state. UC then refinanced this debt and has put it to use to support its finances.

Following these changes, the state and the UC system started employing a three-year plan for capital projects. The state agreed to give each UC campus $50 million to use over a three-year period for deferred maintenance or projects that address seismic, life safety, or enrollment needs. While helpful to some degree, the $50 million does not go far. For instance, UC San Diego has $1.2 billion capital need for 2017-2027. The money from the state has to be leveraged with other funding sources to be put to effective use. Of that $1.2 billion, nearly $790 million will come from the campus. The source or sources for almost $380 million has yet to be identified.

Filling the $380 million gap has led to a shift in non-state sources of funding. These sources include non-resident student tuition, generating income on interest from mid- to long-term financial investments, and self-supporting revenue streams such as rent on housing. Another source is the use of philanthropic donations. While it is a long-standing tradition for donors to support the construction of a building (and have it named in their honor), UC San Diego has began pushing donors towards creating endowments rather than paying for construction. Money from the endowments can then be used to support operations and/or programming. Another response to the decrease in state funding is the allowance of internal loans for equipment acquisition and creating a funding backstop for capital projects. This system acts like an internal bank, but it is only used for short term, low risk loans.

Public-private partnerships (P3) are also being employed to finance capital projects. There are three examples of how the university works with a private entity. This includes a ground lease where the university leases its land to a private entity, and that produces income for the university. The second type of P3 is a ground lease-lease back. In this case, the university leases land to a private entity which in turn leases some or all of the building it constructs back to the university. The university therefore does not have to pay for the construction of the building, but still gains the benefit of using it. This is done for programmatic purposes that further the university mission. The third type of P3 is a build-to-suit where a developer builds a building (often for specialized use) and sells it to the university.

3.20 Philanthropic Giving and Community Supporters

Charitable giving is part of a broader culture within the US. In 2015, total charitable giving in the country totaled $477 billion following annual increases since 2009. Of that, 73% was given by individuals, followed by foundations at 15%, bequests (wills and trusts) at 7%, and corporations at 5%. There are many motivations for giving a donation. Personal reasons tend to be more important than the tax benefits, which usually fall fairly low on the list of motivations. That said, the tax benefits do provide some incentive. If an individual meets the government requirements, they may deduct up to 50% of their adjusted gross income. Corporations are generally limited to deducting up to 10% of their pre-tax revenue for one year. As with individuals, motivations for corporate giving vary. It may be done as part of their corporate social responsibility, support research in an area relevant to the company's business, or can help with brand recognition.

There are different types of gifts besides cash. These can include charitable trusts and donor advised funds (DAFs). If a donor wants to make a large gift and get the deduction, but does not know where to give, he or she can place their money in a DAF and still receive the deduction. This creates more time for the donor to make a decision on where the gift will go. It also offers multiple opportunities for recognition as the money flows through the DAF and is re-granted elsewhere.

Charitable giving has become an important resource for higher education in the United States, equaling about $4.3 billion in 2017. Giving to the UC system totaled $2.1 billion in FY2015-16. Unlike giving overall, foundations were the largest donor type, followed by individuals, and then corporations. Much of the foundation giving was focused on health-related research areas. Alumni giving totaled only about 10%, which is below what it typically seen with private universities. Foundations are a large source of gifts,

typically because of the medical research in areas the foundations which to support and the UC system has five medical centers.

UC San Diego received $213 million, with 51% coming from foundations. Again, this is driven by a focus on health-related research, which the university has strengths in. Only 2% of the total amount came from alumni, but 23% came from unaffiliated individuals. The university is able to attract charitable gifts because of its strong reputation for innovation and collaboration. It also has a diverse set of capabilities that attract a wide range of interests. The university works hard to bring the community in to learn about the institution, and has invested heavily in creating a strong, professional staff who can effectively communicate the value and impact of a gift. The staff, numbering around 120 people across campus, also do a good job in keeping donors engaged with the university, through event and activities, in addition to their stewardship responsibilities to ensure that the gift is used well. The Chancellor and university leaders are all involved in developing a strategy and providing the compelling stories that can attract donors.

The UCSD Foundation is a separate legal entity through which gifts are provided to the university. It has a two-tier governance structure, with a 42-member board of trustees made of volunteers from the community and professional staff. The Chancellor serves as the president of the board. The Foundation currently has about $900 million in assets.

In addition to charitable giving, the university relies on a range of volunteer and support groups. There are about 80 such groups, which are mostly formed from donors. The Chancellor's Associates is one example. Individuals who donate $2,500 to support student scholarships can become a member. The Student Foundation is another example, where students learn how to manage a charitable fund under the mentorship of UCSD Foundation board members.

The session concluded with a discussion about how to increase donations to a university. It is hard work. However, the speakers stressed consistency and relationship building. Proper engagement with people who have a curiosity about a subject or issue may often result in a philanthropic donation. It was also noted that large donation may come from unexpected places. Alumni may not give much while they are alive, but it is not uncommon for a large bequest via their will or trust after their death. The lesson here being that a university stands to benefit it if treats all donors, even the small ones, well.

3.21 Alumni Relations

Enabling alumni to share their time, talent, and treasure (meaning money) with the UC San Diego community is part of the vision statement for UC San Diego's alumni relations team. However, before making an ask for time, talent, or treasure (with time being the most important), it is critical to build trust. To do that, alumni outreach and engagement at UC San Diego is organized into six units: alumni relations, alumni publications, international fundraising, annual giving (for small donations), career center (recently integrated into the alumni department), and pipeline development. Engaging early on while people are still students can lead to philanthropic donations later. The Tarnside Curve of Involvement is a good illustration of the relationship between engagement and giving over time.

UC San Diego has over 185,000 alumni, with 70% residing in California. Long term, the alumni department has adopted a strategy to place more of an emphasis on career services with a focus on those who have an unclear career path. To learn how to better serve alumni, the department recently conducted a survey. While the response rate was not what was hoped for (about 2,000 respondents), they were able to get some insight in what alumni are seeking when they connect with the alumni department. Among those are social experiences, career and professional development (including networking and learning about new career opportunities), and lifelong learning to improve or gain skills. As a side note, one important lesson learned is that the survey was probably too long, taking about 18 minutes to complete. Those who did not complete the survey usually stopped at about 8 minutes. Going forward, the alumni department is looking at doing micro surveys on Facebook and post event surveys.

The alumni department uses several strategies to manage and maintain the network of alumni. One is digital outreach via social media and emails. There are frequent events (to showcase university leadership, faculty, and/or successful alumni). The alumni department is also launching an exclusive social network for alumni to help them better connect, get referrals and introductions for jobs, etc.

Lastly, in addition to the networking benefits the alumni department is providing, it also offers things such as library access, discounts on continuing education courses through UC San Diego Extension, and partnership programs for discounted rates on services such as hotels and insurance.

3.22 Fundraising in Asia

The international fundraising unit within the alumni department was created six months ago and currently has two staff. UC San Diego has a significant number of international students, about 8,000, currently enrolled. About 5,000 of those are from China (150 are from Japan). Parents of these students are the primary focus of the fundraising outreach. When parents are approached by the fundraising staff, particularly those who are in a culture that does not have a similar tradition of philanthropy like the U.S., there is often confusion about why the university is asking for more money beyond what they have already paid. Tuition is $38,000 per year and the family must demonstrate their ability to pay for all four years for an undergraduate degree. That is a big financial commitment. The fundraising staff therefore have to explain what can be done with the money and the value of the donation. Funds can be used to enhance the extra-curricular experience of students, for career development, and creates new opportunities to get engaged in research.

In addition to current international students, UC San Diego now has a significant number of international alumni. Many of these are now in the 20s and 30s and have returned to Asia to work. They are also prospects for fundraising.

Fundraising in Asia has unique challenges. There are cultural sensitivities that one must be aware of and be respectful of. People are not used to being asked for money, so there is a lot of education and relationship building that must take place. Fundraising staff has to spend time explain why the university is seeking the money and how that money will be used. Trust is important. Impact reports and regular updates are helpful for people to get an understanding of how the university is using the funds. Communication methods are also critical. The fundraising staff need to know where people like alumni are and what sorts of tools people use to communicate. These can be country-specific. For instance, the social media platform WeChat is incredibly popular in China. If the fundraising staff are not using WeChat, they are going to have a hard time finding and staying in touch with people in China. Another strategy is engaging international students while they are at UC San Diego. This can include hosting receptions for international students and their parents when school starts, campus tours, specialized services from the career center, etc. This will make follow-on engagement after they graduate much easier.

3.23 Strategic Academic Development Program (SAPD)

The Strategic Academic Development Program (SAPD) is a new initiative to create educational offerings, with an eye towards more flexible and creative formats, such as online programs and the like. Williams Ettouati is the Director of SAPD, having recently

taking on the appointment. Prior to joining the Skaggs School of Pharmacy as a professor, he worked in industry for many years. With SAPD, he is hoping to bring a more business-like approach to the university for creating new programs in response to a rapidly changing competitive environment for education. UC San Diego has been slow in adopting online learning at a time when people are increasingly turning towards online options and other institutions have been investing heavily in online offerings. UC San Diego is also under financial pressure, so new educational programs that are responsive to the market are likely to create new revenue streams that can be reinvested into enhancing the research and education enterprise.

SAPD was launched to stimulate new ideas and test them using a bottoms-up process, informed by market research, and supported by experts. These ideas can include flexible and/or sequential degrees, mini-master's degrees, more online content, and the like. The benefits are better leveraging of existing content and faculty excellence, increasing student recruitment and preparation, greater reach in terms of the size of the audience and its diversity (especially for online courses that may have thousands of students around the country and world), better alignment with the needs of students and employers, creating a pipeline of engagement through sequential programs, reducing demand on the university's physical infrastructure via the use of online courses, and improving UC San Diego's position in the competitive education market.

The rollout process has included numerous conversations with faculty, deans, and administrators. While contentious among some who believe in a traditional approach to how education should be delivered, the initiative gained sufficient support from faculty and administrators to proceed. During a three-year phase-in period the administration will cover the upfront costs of those program selected as demonstration projects. The first round of proposals was recently reviewed. Of the 29 applications, 11 were selected for demonstration projects based on their creativeness and how they help the campus achieve its strategic goals. These demonstration projects then get support in terms of market analysis to identify competitive differentiation as well as instructional services for faculty to create online courses. The demonstration projects will then begin the path towards gaining full approval. For for-credit programs, they must be viewed by the appropriate council (undergraduate or graduate), then the Academic Senate, and finally the UC Academic Senate/UCOP. The approval process for new degrees is slow and conservative, but it is hoped that those that have gone through SAPD will have a higher probability of acceptance because they have already undergone significant review in the application and demonstration process.

3.24 International Outreach

Miwako Waga, Director of International Outreach, assists in developing research collaboration with other universities and industry. She is based within ORA and works in conjunction with other units, including OCGA, the Office of Innovation and Commercialization, Government and International Relations, and Postdoctoral and Visiting Scholars. Collaboration is often focused in the departmental areas of Engineering and Health Sciences, as these receive a significant amount of foreign industry awards to UC San Diego. Geographically, there is a focus on Asia, and specifically Japan as it was the top source of foreign industry awards in FY2014 and FY2016. In terms of overall international gifts, South Korea was the top source from FY2012-2015. Japan steadily increased from 2014 to becoming the leading source in FY2016. Outreach activities to continue and grow these international connections include events (tours, conferences/symposia, etc.), media promotion and publicity, facilitation of relationship building, cooperation with external organizations, the development of research agreements, and the establishment of the Tokyo Office in 2016. The Tokyo Office, located in the Nihonbashi area, provides increased opportunities for UC San Diego to collaborate with entities in Japan. The office is available for UC San Diego staff on a recharge basis to use for meetings and events. The discussion then turned to different types of corporate partnership models. These can include sponsored research agreements, membership in various research centers and institutes, undirected research (gifts), and service agreements (contracts). The various uses and benefits of each were described.

3.25 Overview of the Jacobs School of Engineering

With over 8,700 student enrollments, the Jacobs School of Engineering is the largest engineering school in the UC system and one of the largest in the country. It conducts $186 million in sponsored research annually, and licenses 30-50 inventions to spinouts or corporate partners each year. It is also ranked in the top 10 public engineering schools in the United States, and is the top ranked UC engineering school for patents and startups. The Jacobs School is organized into six academic departments, two of which, Nano Engineering and Structural Engineering, are considered non-traditional in terms of their focus. Two-thirds of its research funding comes from federal and state government sources. About one-third comes from industry.

When it comes to partnering with industry, Dean Al Pisano noted that it is a requirement now and not something considered optional. The Jacobs School generates a lot of talent who then go on to enter the workforce. While the school does not do job

training per say, it does train its students in the fundamentals they need to be successful in their careers. Because of this role in creating talent, the Jacobs School actively builds relationships with companies around a variety of topics – from curriculum to the direction of research to internships. These efforts are important in that they help the school retain relevancy in the type of work that it does, but it also helps foster more creative, innovative ideas among faculty, researchers, and students.

Dean Pisano highlighted types of industry engagement mechanisms such as the agile research centers, institutes, and the corporate affiliates program. There are currently 11 agile research centers. These centers are joint initiatives created by faculty from the Jacobs School partnered with those from different parts of UC San Diego. To gain approval, three to eight faculty members must prepare a 45-minute presentation to the Dean. If approved, the Dean's office will provide three years of administrative services at no charge as the centers are not large enough to support administrative staff on their own. If the center secures sufficient funding from industry, the center will continue to receive support from the Dean's office, but also must start repaying the Dean's office for the initial support. So far, they have seen that faculty that participate in the centers write better research proposals and are more competitive in getting funding. Agile centers average four faculty members and 30 graduate students. The Dean has found that the centers also are effective at bringing together faculty who would otherwise be working in isolation. Additionally, the centers create another entry point for industry into the university.

Institutes with ties to the Jacobs School must cross boundaries with other parts of the UC San Diego campus. For instance, the Institute for the Global Entrepreneur is a partnership between the Jacobs School and the Rady School of Management. The creation of institutes is typically driven by the dean, who then recruits faculty to work in the associate area of research. Engagement with industry of a key metric. For instance, the Institute for Contextual Robotics has been able to support 50 faculty members because of industry funding.

The final initiative to encourage industry engagement is the corporate affiliates program (CAP). This is a membership-based mechanism for industry to engage with faculty and students. It also provides an opportunity for industry to have input on the research direction of the Jacobs School. The CAP is described in more detail in a following session by Cody Noghera.

Before concluding the session, Dean Pisano gave another example of a strategy that deliberately mixes curiosity-driven and use-driven research along with industry involvement. The Collaboratory for the Digital Future will be a new building and

research initiative that will focus research that meet five criteria: It must create new data streams, provide real time analytics, lead to actions and agents (those committed to taking action), must be cyber secure, and also lead to commercialization. The Collaboratory will establish grand challenges in vertical markets and target companies in those markets for involvement. Companies that want to participate will be asked to provide funding that can support the building, faculty, students, and/or research. They may also sit on advisory boards and be part of joint lab meetings. This initiative will help companies better understand trends in pre-competitive areas, while helping the university research community learn what challenges industry face so that it may inform their research.

3.26 Business Development at the Jacobs School of Engineering

Business development is about building relationships with industry that lead to long term benefits for both organizations. It is not sales, which is a common misperception. Ideally, a person with a strong background in industry, who has the knowledge of how companies operate, and a broad network of contacts, will be a good candidate for conducting business development. They are able to keep tabs on what is going, meaning they conduct market research to spot emerging trends and what things companies are interested in. They then inform the Dean and faculty of new opportunities. As such, being a good communicator is a critical part of effective business development.

Jan Dehesh provided an example of business development based on a Silicon Valley-based Fortune 500 company she has been engaged with. Jan did research on the company by looking at its website and press releases to see what the company says its interests are. In this example, the company's interests included internet-of-things, 5G wireless, and promoting greater diversity in its workforce, among other items. Jan then developed a profile of the capabilities the Jacobs School already has in those areas, as well as what is planned in the future. The profile was presented to the company to highlight that the Jacobs School is a leader in these fields and its capabilities are aligned with the company's interests. After nine months of discussions, the company is now a member of the Jacobs School's Corporate Affiliates Program, has sponsored $1.8 million in research, and is currently in discussions about involvement with both the Contextual Robotics Center and the planned Digital Collaboratory. A relationship is now clearly in place. The Dean can contact the company president directly and vice versa.

3.27 Jacobs School of Engineering Corporate Relations

Corporate relations at the Jacobs School is handled by five people plus support staff. Cody Noghera, the Executive Director for Corporate Research Partnerships, provided some recommendations for how to approach industry engagement. One of the primary functions of the corporate relations team is to facilitate companies that want access to talent at the university and also help students find jobs. Companies are also looking for solutions to relevant problems. For their part, universities must determine if and how they align with these motivations, and Cody offered some self-reflective questions that universities should consider before proceeding. He then turned to describing the Corporate Affiliates Program (CAP), which has more than 70 members who pay annual membership dues at a tiered rate based on company revenues. All members receive the same benefits. The total amount received in dues from the CAP is typically around $1 million per year. Companies are interested in joining the CAP for a variety of reasons. These include access to talented students (who may become interns or hired after graduation), learning about faculty research that is relevant to their products which could lead to follow-on grants or contracts, and providing input into the research mission of the Jacobs School. In addition to various activities conducted by the CAP, members may attend three board meetings per year. Meetings provide an opportunity for companies to network with students and faculty who are given opportunities to present, as well as interact with the Dean. The Dean provides an overview on his vision for where the school is going, and then asks for feedback. Among the key lessons learned from years of experience with the CAP is to take a team approach and to determine where companies fit in to a spectrum of engagement. Metrics should be put in place to help track progress. Cody also noted the importance of packaging strengths, such as grouping faculty who have skills and knowledge that align with company interests. There are also opportunities for researchers from CAP members to work at UC San Diego under the Visiting Industry Fellows program. The corporate relations team also organizes a research expo to give companies a flavor of the work being done by Jacobs School faculty and students. One major benefit of the expo is that it drives more interactions with industry, which may lead to deeper relationships and positive outcomes in the future.

3.28 Overview of UC San Diego Health Sciences

Healthcare and education are both industries that are under a lot of pressure. In the United States, federal and state funding to education has decreased over time, while the costs to deliver these services have increased. Administrators and managers are

therefore looking for ways to do more with less. Public universities need to be able to adapt to a changing landscape. Before getting into an overview of UC San Diego's Health Sciences, Doug Ziedonis shared the principles he has adopted for how he is adapting to the new landscape. This includes clarifying the brand of the institution and aligning with the right partners, preparing and supporting its young medical faculty and students to help them avoid burnout later in their careers (through coaching and mentoring programs, for example), defining key priorities and seeking new funding sources (e.g. industry, philanthropic foundations, venture capital, etc.), and making clear decisions on what the institution will do and what it will not do.

The UC system has five medical centers. UC San Diego has one of these and it offers teaching, research, and clinical health under its Health Sciences division. Of the $1.2 billion in research being done at UC San Diego, $687 million or more than half of the total, is conducted within its Health Sciences division. UC San Diego Health Sciences is divided administratively between its academic enterprise (the School of Medicine, Skaggs School of Pharmacy, and a soon-to-be-launched School of Public Health) and the clinical enterprise that includes the hospitals and clinics that provide healthcare services. It recently conducted its own strategic plan to identify six topics and enabling technologies that it will focus on in the coming years. This includes starting the School of Public Health, which will bring together collaborations between disciplines across campus. The school will be organized by topics and cross cutting threads, such as the integration of data sciences, ethics, and global health issues.

In a response to a question about hiring, Dr. Ziedonis replied that Health Sciences conducts faculty hiring differently than the main campus. Salaries of main campus faculty are paid for by state funding. In Health Sciences, only about half of the faculty get state money, and blended sources tend to be common. Every Monday, new hires are reviewed by the Associate Vice Chancellor, and how the positions are funded are discussed. Faculty can earn outside money, from consulting for instance, but this must not create any conflicts of interest. These issues and others are discussed before a final decision is made.

3.29 Redevelopment of the Hillcrest Medical Center

Robert Clossin, Director of Campus Planning, provided an overview of UC San Diego's planned redevelopment of its medical center in Hillcrest. This provides a good case study of many of the issues the university has faced following reductions in state funding. These include responding to unfunded mandates, no longer receiving state

money for capital projects, developing alternative revenue sources, continuing excellence in research and education, serving the public, and community engagement.

The Hillcrest Medical Center is located near downtown San Diego, about 20 kilometers south of the main campus. It is a 62 acre (0.25 square km) site that has 40 buildings including a 400 patient bed hospital, research labs, in-patient healthcare, a trauma center, and a burn center. The hospital was originally the County Hospital. Following UC San Diego's founding in 1960 and the opening of the School of Medicine in 1962, it took over the County Hospital in 1966 and has operated it since.

Being prone to earthquakes, the State of California has mandated that hospitals meet certain seismic safety standards to better withstand damage. To meet these codes, hospitals must be retrofitted, completely rebuilt, or closed if they cannot comply. The State is not providing funding for entities trying to meet these goals. UC San Diego determined that in order to meet the standards the come into place by 2030, it would be more cost effective to completely rebuild the Hillcrest Medical Center rather than retrofit it, and began an intensive planning process two years ago. The vision is for a new hospital, new outpatient facilities, 950 housing units for faculty and staff, and some mixed-use units. The total cost is estimated to be around $2 billion ($1 billion for the hospital portion, about $500 million for outpatient services, and the remainder for housing, research labs, etc.). Reconstruction will take place from 2019 to 2033, and is complicated logistically in that the new hospital must be built while the existing hospital is in continuous operation, and is complicated financially since the State of California no longer provides funding to the UC campuses for capital projects. The housing will essentially be self-financed via a public-private partnership (P3), with revenue generated from renting the units. The remaining amount will have to be funded through a combination of philanthropic donations, university investments, and debt-financing. Because the hospital is in a heavily residential area, the university has undertaken a significant community engagement and communication effort to allay concerns and hopefully avoid any future litigation that could delay the project. Numerous meetings were held with community groups and representatives from the City of San Diego government through town hall sessions, open houses, advisory councils, presentations to community groups, and meetings with elected officials. So far, there have not been too many serious concerns raised. As this is a university hospital, most residents have been understanding. However, increased traffic has been an issue people have brought up. As such, UC San Diego is incorporating transit options to mitigate the increase. The next major step in the process is the release of an environmental impact report (EIR), which is require by state law for major construction projects. EIRs are often used as opportunities by opponents to file lawsuits to challenge projects. Again, because of the extensive outreach the university

has made with the community, it is hoped that things will go smoothly without any legal challenges.

3.30 Understanding the UC System and California Higher Education

This session provided an overview of the higher education system in California and the role of the University of California within it. California was the first state in the United States to develop a coordinated, multi-tiered approach to higher education. This is usually dated to the adoption of the Master Plan for Higher Education in 1960, but it actually goes back to the 1920s when the tripartite structure of the University of California, the California State University (CSU), and community colleges were all operating. California was also the first state to have a multi-campus university system when the southern branch of the California State Normal School joined UC Berkeley in the UC system as UCLA in 1919.

Today the tripartite system in California has nearly 3 million students enrolled across 10 UC campuses, 23 CSUs, and 110 community colleges. The community colleges have the vast majority of students, numbering 2.1 million. This is followed by the CSUs with 478,600 students, and then the UC system with 272,600 students. This sprawling arrangement continues to work because of mission differentiation that has created distinct and complementary roles for each of the three types of institutions. The UCs and CSUs have coordinated admissions requirements to reduce competition over pools of potential students. They also attempt to coordinate their outreach efforts to high school students and teachers. Lastly, there is the transfer function that allows students, primarily from the community colleges, to enter a UC or CSU after completing their two-year associate degree. This has proven to be an effective mechanism for putting people on the path to a bachelor's degree. About 26% of UC students are transfer students.

Focusing on the UC system, while it is has ten campuses now, it operates as a single institution is several aspects. It has a single governing board, the UC Board of Regents, a central administrative office, the UC Office of the President, and strong faculty involvement through the system-wide Academic Senate. The UC campuses have a shared mission and operational policies (admissions, tuition, personnel, etc.). There are differences between the individual campuses as they meet the needs of their regional communities, and there is occasional tension between them. However, by and large, the ten campuses operate as a single, coordinated system fairly well.

The future does pose significant challenges. The UC system must make a decision to grow or not grow and ensure that it is financially sustainable either way. There are pressures to accommodate student enrollment growth because of the demographics of the state's population, and there are financial concerns as well. The state government provides less funding, and the UC has its own financial obligations that it must meeting, such as growing pension costs for its retiring employees. These are and will be sorted out in the years and months to come.

3.31 Failed Initiatives and Lessons Learned

This session was devoted to hearing about the experiences and circumstances around the failure of two initiatives undertook in starting new professional degree programs: the School of Architecture and a proposed merger with an existing law school, the California Western School of Law (more commonly called Cal Western) with UC San Diego.

Following the successful launch of the School of International Relations and Pacific Studies (IR/PS), UC San Diego's international affairs school (now known as the School for Global Policy and Strategy), in 1986, then Chancellor Richard Atkinson looked to start another professional school. There was a lot of real estate development going on at the time, and architects and real estate businesses in the community liked the idea of a school for training new talent. Following the suggestion from a San Diego-based architect who was a member of the UC Board of Regents, Chancellor Atkinson formed a small, interdisciplinary committee to review the idea of starting an architecture program. Within UC San Diego, the engineering, urban studies, and visual arts departments supported the idea. The San Diego community voiced support. The other two architecture schools in the UC system, at UCLA and UC Berkeley, both were surprisingly helpful and supportive. Combined, the wide range positive feedback helped get the proposal approved by the Regents in 1989. The Chancellor then had a faculty committee recruit a dean. They hired Adele Santos from the University of Pennsylvania, and in 1990, she put together a five-year plan and budget for how the school would grow. She then begin hiring new faculty. The new architecture school was publicly announced with a high profile symposium that included several famous architects as speakers and had about 1,000 attendees. Despite the public support and fanfare, an economic recession hit soon afterwards. This forced the state to cut its funding to the UC system. UC San Diego ended up with a permanent cut of $40 million. This meant many programs had to review their future plans. Being new, the School of Architecture was particularly vulnerable. Other departments that were facing their

own cuts were reluctant to share resources with the new school. This was also complicated by the strong personality of Dean Santos. She was a vocal advocate for her school, which should be expected, but she had created a bit of an adversarial climate on campus. Additional resources were not forthcoming, meaning that the architecture school was not going to develop into a full program in the near future. In the end, the faculty members she recruited knew their future at UC San Diego was limited and began looking elsewhere. By 1993-1994, even Dean Santos decided to leave and the school was shut down. The broader San Diego community was very disappointed as they had always been strong supporters. For the faculty that had been hired, they were able to transfer to the architecture schools at UCLA and UC Berkeley. This highlighted an advantage that UC San Diego has being part of a multi-campus system. Tenure is system-based, not campus-based, which helped make the transfers easier. One key lesson learned was that the university had not considered seeking philanthropic funds to make up for the state shortfall. That strategy had not been necessary in the past, and so it did not occur to anyone to be an option. However, this lesson was taken to heart later when the Rady School of Management was founded. Philanthropic donations were sought from the beginning in that case because administrators knew that they could not rely on the state to provide all the funding.

The discussion then turned to the proposed merger of an existing independent law school into UC San Diego. The idea of having a law program had long been considered. In fact, that had been Chancellor Atkinson's initial preference before starting IR/PS. However, the cost and concerns about competition with the other law schools in the UC system meant the idea was put on hold for many years. It resurfaced in the early- to mid-2000s when the dean of an independent law school, Cal Western, offered to merge all of its assets into UC San Diego. As in the case of the School of Architecture, a faculty committee was set up to review the concept. Some committee members were very skeptical as to Cal Western's motivations. Cal Western, while a decent local law school, was not highly ranked nationally. This meant that there were also concerns about its quality of its faculty in terms of contributing to legal research and scholarship at a level expected for a UC professor. That said, Cal Western did have some specialties in health law and maritime law, which could make for interesting connections with UC San Diego's strengths. A merger would also be less costly than starting a whole new school from scratch, although new financial resources would need to be secured either way. New faculty or researchers might have to be hired to raise the academic quality, for instance. In the end, financial considerations were largely responsible for killing the proposal, especially following the 2008 recession. Several financial models were developed, and none penciled out favorably. Further, the concerns over both the quality of faculty and the types of students were difficult to overcome. To attract top

tier students, it was suggested that UC San Diego would have to heavily discount tuition for the first few years, compounding the difficulties with the finances. The last key factor was the retirement of Cal Western's dean who had been the primary champion on their end. The dean who came in as a replacement was in favor of remaining independent. A lesser factor was resistance from the other law schools in the UC system. That could have been overcome, but it would have required some political maneuvering. The proposal was "tabled" in 2009, and by 2011 it was clear that a merger would not take place.

Among the lessons learned from both examples are strong leadership from the top, being collaborative with faculty to get their buy-in, and adapting to the change in the culture of philanthropy to support academic programs in lieu of state funding.

3.32 Program Wrap Up and Debrief

The program concluded with an opportunity for the participants to discuss points they heard over the course of the week-long program. Overall, participants appreciated the quality and transparency of the information shared by the speakers. They were impressed by the attitude at UC San Diego to try new things and challenge the status quo. Yet education importantly remains core to the university. They also noted that it was helpful to see that there is a career path into administration, unlike at Japanese public universities where faculty spending time in administrative roles is more limited. Similarly, participants noted that non-academic university staff are often specialists, filling roles in areas such as business development, fundraising, corporate relations, finance, and the like. There is a level of professionalism that develops because the staff remain in these roles for a long period of time. This is in contrast to Japanese universities where staff tend to be generalists and rotate into different positions every two to three years. At the top level, it was also noted that the Chancellor at UC San Diego has significantly more power than his counterpart at a Japanese university. This enables some things to happen more quickly and definitively, although they may not be as consensus-based. Among the topics that were particularly illuminating were the role donations and philanthropic giving plays, the connections with a wide range of community members and stakeholders (alumni, parents, etc.), conducting an economic impact report (something several participants had never considered before, but clearly saw the value of), and hearing about how retired administrators and professors can become part of the administrative infrastructure.

For any future groups, participants stated that it would be helpful to have some examples of US university systems that have less autonomy from their state

government compared with the UC system. These would be more analogous to the Japanese context, and may provide some additional insights into adapting to budget reductions. Additionally, some participants asked for greater detail in how UC San Diego responded to cuts, meaning the processes used and the timeline, rather than just noting the outcomes.

4 Appendix

4.1 Participant List (UCSD and Japan)

UCSD Participants

- Farrell Ackerman, PhD, Chair, Academic Senate; Director, Human Development Program; Professor of Linguistics, UC San Diego
- Sandra Brown, PhD, Vice Chancellor for Research, UC San Diego
- Sean Burns, Director of Global Engagement and Advancement, Alumni Department, UC San Diego
- Carol Chang, Chair, Board of Trustees, UC San Diego Foundation
- Robert Clossin, Director, Physical & Community Planning, UC San Diego
- Linda Collins, Assistant Vice Chancellor and Director, Office of Contract and Grant Administration, UC San Diego
- Jan Dehesh, Director of Business Development, Jacobs School of Engineering
- John Aubrey Douglass, Senior Research Fellow, Center for Studies in Higher Education, UC Berkeley
- Robert Dynes, PhD, President Emeritus, University of California; former Chancellor, UC San Diego, Professor of Physics, UC San Diego
- Lynette Essey, MBA, Projects Director, Office of Operational Strategic Initiatives, UC San Diego
- Williams Ettouati, D.Pharm, Director, Strategic Academic Development Program; Director, Industrial Relations & Development; Associate Director, Center for Drug Discovery Innovation, Skaggs School of Pharmacy and Pharmaceutical Sciences, UC San Diego
- Lori Hullings, Associate Director, Academic Senate Staff, UC San Diego
- Martin Kenney, PhD, Distinguished Professor Department of Human Ecology, UC Davis
- Kristin Kielich, MBA, Engagement Manager, Office of Operational Strategic Initiatives, UC San Diego
- Miroslav Krstic, PhD, Senior Associate Vice Chancellor for Research; Director, Cymer Center for Control Systems and Dynamics, UC San Diego
- Sylvia Lepe-Askari, Assistant Vice Chancellor, Campus Budget Office, UC San Diego

- Marilyn (Mengying) Li, Director of Development, Asia, Alumni Department, UC San Diego
- Mercedes Muñoz, Executive Director of Financial and Budget Management, UC San Diego
- Cody Noghera, Executive Director for Corporate Research Partnerships, Jacobs School of Engineering, UC San Diego
- Nathan Owens, Director, Global CONNECT, UC San Diego Extension
- Carol Padden, PhD, Dean, Division of Social Sciences and Sanford I. Berman Chair in Language and Human Communication, UC San Diego
- Albert Pisano, PhD, Dean, Jacobs School of Engineering, UC San Diego
- Marlene Shaver, Assistant Vice Chancellor of Advancement Services, UC San Diego & CFO, UC San Diego Foundation
- Elizabeth Simmons, PhD, Executive Vice Chancellor for Academic Affairs and Distinguished Professor, UC San Diego
- Angela Song, PhD, Senior Director, Organizational Assessments and Strategy, Office of Operational Strategic Initiatives, UC San Diego
- Miwako Waga, Director, International Outreach, Office of Research Affairs, UC San Diego
- Mary Walshok, PhD, Associate Vice Chancellor for Public Programs and Dean, University Extension
- Briana Weisinger, Startup Advocate, Office of Innovation and Commercialization, UC San Diego
- Stephen Welter, PhD, Vice President of Research and Dean of Graduate Affairs, San Diego State University
- Douglas Ziedonis, MD, MPH, Associate Vice Chancellor, Health Sciences, UC San Diego

Japanese Participants

- Toru Aoki, PhD, Professor, College of Informatics, Shizuoka University
- Masaaki Goto, PhD, Vice President, Saga University
- Kei Hashimoto, PhD, Vice Director-General, Institute for Promotion of Higher Academic Education and Professor, Utsunomiya University
- Toru Iiyoshi, PhD, Deputy Executive Vice President for Education, Director and Professor, Center for the Promotion of Excellence in Higher Education, Kyoto University
- Koichi Ishimori, PhD, Professor and Dean of Faculty of Science, Hokkaido University
- Kanetaka Maki, PhD, Assistant Professor, National Graduate Institute for Policy Studies; Associate Professor, Waseda University
- Nobuhiro Matsushita, PhD, Professor, Department of Materials Science and Engineering, Tokyo Institute of Technology
- Yumiko Onishi, Professional Staff, National Graduate Institute for Policy Studies

- Takeshi Oriyama, PhD, Vice President, Ibaraki University
- Kaoru Tamada, PhD, Vice President, Kyushu University
- Masahiro Terada, PhD, Dean of Graduate School of Science and Faculty of Science, Tohoku University
- Takahiro Ueyama, PhD, Executive Member, Council for Science, Technology, and Innovation, Cabinet Office, Government of Japan

4.2 Program Agenda (electronic file attached)

4.3 Lecturer Biographies (electronic file attached)

4.4 Text and Presentation Materials (electronic files attached)

6.5　シンガポール国立大学 研修プログラム

UNIVERSITY LEADERSHIP PROGRAMME FOR JAPANESE UNIVERSITIES

21 - 23 JANUARY 2019

Programme Schedule

DAY 1: MONDAY, 21 JANUARY 2019		
Timing	**Activity**	**Location**
9.15am	Bus to NUS Contact Person: Amber Tan: +65 90601220 Jessie Lee: +65 96677879	Carlton Hotel, 76 Bras Basah Rd, Singapore 189558
10am – 12pm	Keynote Speech: Managing a leading global university: What does it mean to inspire, educate and transform By Prof Philip Liu Li-Fan	NUS Vista, 21 Lower Kent Ridge Rd, Singapore 119077, Level 6
12pm – 2pm	Lunch	NUS Nexus, 21 Lower Kent Ridge Rd, Singapore 119077, Level 5
2pm – 4pm *Teabreak at 4pm*	Lecture: Academic and Administrative Management in a Global University By Laura Lim	NUS Vista, 21 Lower Kent Ridge Rd, Singapore 119077, Level 6
4.30pm – 5.30pm	Lecture: Campus planning and Infrastructure Development By Prof Yong Kwet Yew	NUS Vista, 21 Lower Kent Ridge Rd, Singapore 119077, Level 6
5.30pm – 6pm	University Town Tour	University Town
6pm to 8pm	Welcome Dinner	University Club, 11 Kent Ridge Dr, Shaw Foundation Alumni House, Storey 4, 119244
8pm	Bus to Hotel	Carlton Hotel

DAY 2: TUESDAY, 22 JANUARY 2019		
Timing	**Activity**	**Location**
9.15am	Bus to NUS	Carlton Hotel, 76 Bras Basah Rd, Singapore 189558
10am – 11am	Lecture: Advancing Student Development By Prof Peter Pang	NUS Vista, 21 Lower Kent Ridge Rd, Singapore 119077, Level 6
11am – 1pm	Lecture: Impact and Governance: Redefining relevance in research By Prof Yoon Soon Fatt	NUS Vista, 21 Lower Kent Ridge Rd, Singapore 119077, Level 6
3pm – 4pm (Teabreak at 4pm)	Lecture: Preparing students for the VUCA World By Joan Tay	NUS Vista, 21 Lower Kent Ridge Rd, Singapore 119077, Level 6
4.30pm – 5.30pm	Lecture: Entrepreneurship as a driver for growth By Dr. Lily Chan	NUS Vista, 21 Lower Kent Ridge Rd, Singapore 119077, Level 6
5.30 PM – 6 PM	Tour @ BLOCK71	BLOCK71, 71 Ayer Rajah Crescent, Singapore 139951
6pm	Bus to Hotel	BLOCK71, 71 Ayer Rajah Crescent, Singapore 139951

DAY 3: WEDNESDAY, 23 JANUARY 2019		
Timing	**Activity**	**Location**
9.15am	Bus to NUS	Carlton Hotel, 76 Bras Basah Rd, Singapore 189558
10am – 12pm	Lecture: NUS as an institution for lifelong learning for a tech-driven future By Dr Chan Mun Kitt	NUS SCALE, University Town, Education Resource Centre , 8 College Avenue West, #02 - 16, Singapore 138608
12 pm – 2pm	Lunch	NUS SCALE, University Town, Education Resource Centre , 8 College Avenue West, #02 - 16, Singapore 138608
2pm – 3pm	Lecture: Internationalisation and Institutional Partnerships By Dr Andrew Wee	NUS SCALE, University Town, Education Resource Centre , 8 College Avenue West, #02 - 16, Singapore 138608
3pm – 3.30pm (Teabreak at 3.30pm)	Yale-NUS College Tour Tour後、バス移動（予定）	Yale-NUS College, #01, 16 College Ave West, 220, Singapore 138527
4pm – 5pm	Lecture: Technology Enhanced Education – Good Thing, or Flash in the Pan? By Prof Erle Lim	NUS Central Library, 12 Kent Ridge Cres, Singapore 119275
5pm – 6pm	Imaginarium Tour	NUS Central Library, 12 Kent Ridge Cres, Singapore 119275
6pm	Bus to Hotel	NUS Central Library, 12 Kent Ridge Cres, Singapore 119275

6.6　カリフォルニア大学バークレー校 研修プログラム

2018 LEADERSHIP FOR TOP UNIVERSITY MANAGEMENT

National Graduate Institute for Policy Studies - Tokyo

Wednesday, September 19 to Friday, September 21, 2018

Berkeley Center for Studies in Higher Education

GOLDMAN SCHOOL OF PUBLIC POLICY
UNIVERSITY OF CALIFORNIA BERKELEY

Sun. Sept. 16	Mon. Sept. 17	Tues. Sept. 18	Wednesday, September 19	Thursday, September 20	Friday, September 21	Sat. Sept. 22
		Arrive at SFO Airport; Check-in to Hotel	**9:30a Group Photo** **9:30 – 10:00a** **Welcome & Overview** **Sudha Shetty**, *Assistant Dean, International Alliances & Partnerships, UC Berkeley* **10:00 – 10:30a** **Welcome & Overview** **Henry Brady**, *Dean of Goldman School of Public Policy* & **John Douglass**, *Senior Research Fellow - Public Policy and Higher Education, UC Berkeley* **11:00a – 12:00p** *A Short Introduction to the UC System* • **John Douglass,** *Senior Research Fellow - Public Policy & Higher Education, UC Berkeley*	**9:15 – 10:15a** **Academic Management and Leadership: The Role of the Executive VC and Provost** Alternates: • **Robert Birgeneau**, *Former Chancellor* **10:30 – 11:45a** **Meeting Budget Challenges: Seeking Quality and Productivity in the Midst of Declining Public Funding (cont.)** • **Rosemarie Rae,** *Vice Chancellor - Chief Financial Officer, UC Berkeley*	**9:30 – 10:45a** **The Future of Graduate Education: Training the Next Generation of Faculty and Researchers** • **Jeffrey Edleson,** *Dean of Berkeley Social Welfare* • **Shankar Sastry,** *former Dean of Engineering , Director Blum Center for Developing Technologies* **11:00a – 12:00p** **Graduation Ceremony** • **Henry Brady,** *Dean of Goldman School of Public Policy, UC Berkeley*	Depart for SFO Airport
			12:00 – 1:30p **Lunch**	12:00 – 1:30p **Lunch Session with UC Berkeley Deans**	12:00 – 1:30p **Lunch**	
			1:30 – 3:00p **Academic Management and Leadership: The Role of Vice Chancellors and Deans** • **Jennifer Wolch,** *Dean of the College of Environmental Design* • **Benjamin Hermalin,** *Vice Provost for Faculty*	**1:30 – 3:00p** **Teaching and Learning: Innovations in Undergraduate Education** • **Cathy Koshland,** *Vice Chancellor for Undergraduate Education, UC Berkeley* **3:00 – 4:00p** **Teaching and Learning: Innovations in Undergraduate Education** • **Meggan Levitt** *Director, Center for Teaching & Learning*	NO SESSION	

The Center for Studies in Higher Education
Goldman School of Public Policy
University of California, Berkeley
Note: schedule is subject to change based on faculty availability